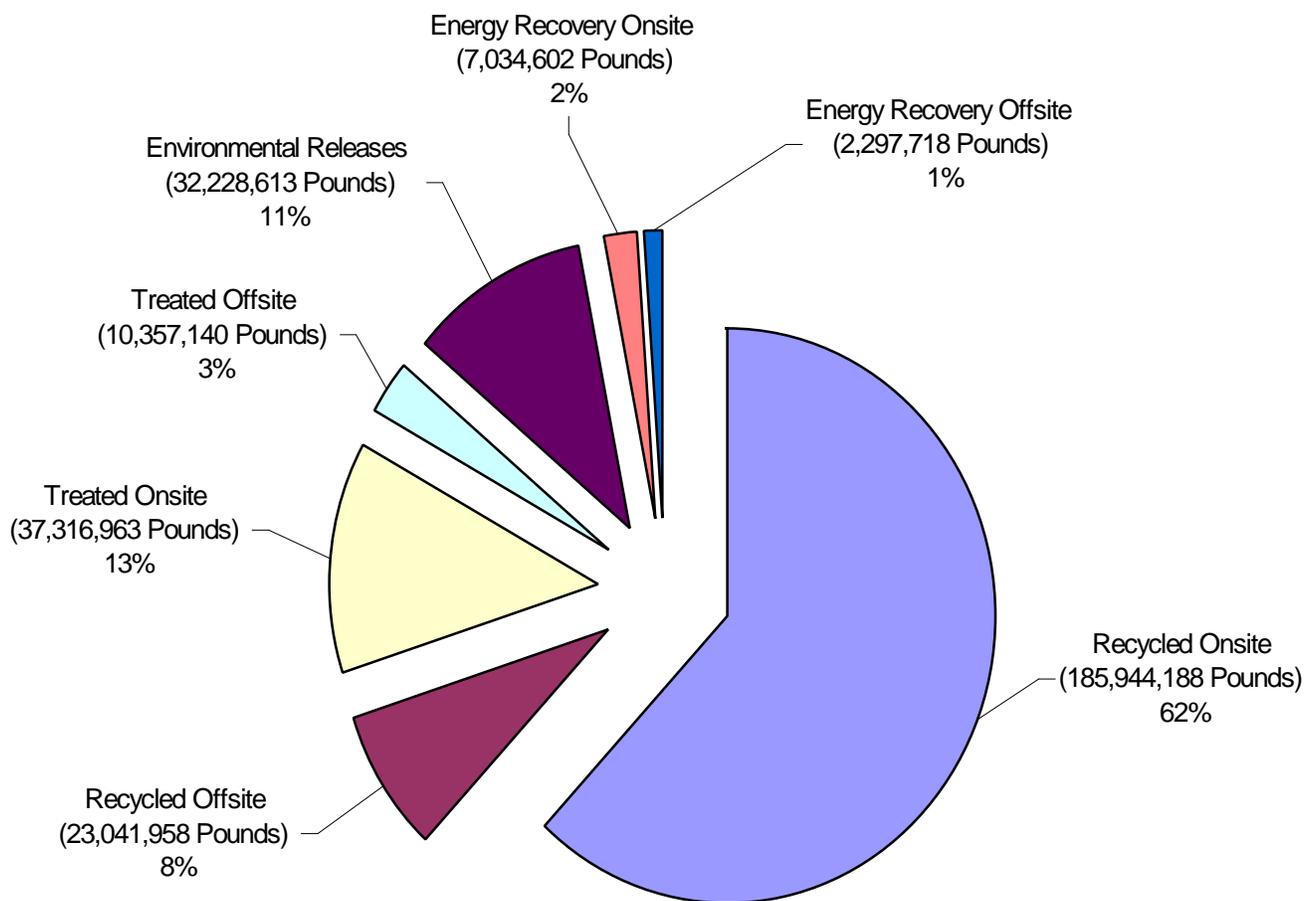


# 1998 Right-To-Know Chemical Information Report

## State of Minnesota

A Summary of Toxic Release Inventory and Pollution Prevention Reports



Total Pounds: 298,221,182



## Table of Contents

	<u>Page</u>
Table of Contents .....	1
Preface .....	3
User's Guide to the <i>1998 Right-to-Know Chemical Information Report</i> .....	4
I. Introduction .....	6
II. Chair's Report: A Summary of the <i>1998 Right-to-Know Chemical Information Report</i> .....	14
III. Summary of Chemical Information Reported Under SARA Title III.....	16
Figure 1: Number of Facilities reporting under SARA Title III, Section 313.....	16
Figure 2: Total Releases and Transfers by Medium (Sections 5 & 6 of Form R) .....	17
Figure 3: Environmental Releases and Chemical Management (Section 8, Form R) .....	18
Figure 4: Facilities filing Toxic Release Inventory Reports by County.....	19
Figure 5: Facilities filing Chemical Storage Reports by County .....	20
IV. Overview of the Toxic Chemical Release Inventory (TRI).....	21
Attachment 1: Top 20 Facilities Ranked by Chemicals Released .....	28
Attachment 2: Top 20 Facilities Ranked by Total Chemicals Managed.....	30
Attachment 3: Statewide Listing of Facilities Reporting Releases, Transfers and Total Chemicals Managed .....	33
Attachment 4: Statewide Listing of Facilities Reporting Under Federal TRI Expansion .....	98
Attachment 5: Statewide Listing of Facilities Reporting Under State TRI Expansion .....	103
Attachment 6: Number of Facilities by County Reporting Releases and Transfers .....	104
Attachment 7: Facilities Filing a Certification Statement (Alternate Threshold Option).....	106
Attachment 8: Facilities That Reported in 1997 but are Not Subject to Reporting in 1998..	116
Attachment 9: EPA State Fact Sheets .....	117
V. Overview of the Pollution Prevention Progress Reports.....	119
Statewide Listing of Facilities Reporting Under Minnesota Pollution Prevention Act .....	123
Facilities That Reported in 1997 but are Not Subject to Reporting in 1998 .....	459
VI. Minnesota Indexing System .....	461
A. Chemicals Ranked From Largest to Smallest Air Releases .....	464
B. Air Toxics Indexing System .....	467
VII. Common Uses of Toxic Chemicals and Their Potential Hazard .....	469
Appendix A: Section 313 Chemical List .....	477
Appendix B: Glossary of Terms .....	492

## Preface

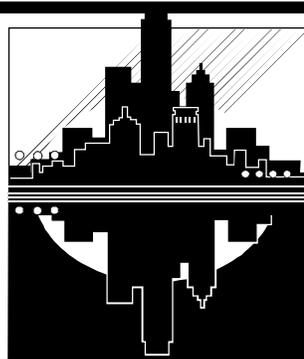
This report, covering calendar year 1998, is the annual summary of chemical management reports submitted by facilities in the State of Minnesota.

The Minnesota Emergency Response Commission prepared this report to enhance accessibility to the data and provide citizen awareness about toxic chemicals in their communities. The Commission 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 Emergency Response Commission at (651) 297-7372, or the U.S. Environmental Protection Agency Title III Hotline at 1-800-535-0202.

**Minnesota  
Emergency  
Response  
Commission**

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



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

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

## **User's Guide to the 1998 Right-to-Know Chemical Information Report**

### *What is this report about?*

This report summarizes chemical management activities for 418 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?*

If you are interested in summary or graphic information, please see pages 6 to 13.

For information about the Commission and SARA Title III, see pages 4 to 22.

For information on your community, turn to page 29 and search for your county (the counties are listed alphabetically in the left hand column). After you find your county, search for your city. All reporting facilities for a city are listed alphabetically by name.

For a ranking of facilities by pounds of chemicals managed, see page 25.

For a ranking of facilities by environmental releases, see page 23.

For a state-wide ranking of chemical air releases in pounds, see page 381.

For a state-wide ranking of air releases by hazard potential, see page 385.

For EPA state fact sheets, see page 107.

For information on pollution prevention activities at facilities, see pages 115 to 370.

*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 Emergency Response Commission (ERC) under the facility reporting requirements of SARA Title III, Section 313, and under the requirements of the Minnesota Toxic Pollution Prevention Act.

*Why is this report important?*

1. **It gives a facility a reason to look at its operations:** Each facility that completes the reporting process has the opportunity to compare this year's chemical management processes to previous year's. 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 418 facilities. These facilities are from select industrial classifications, have more than ten employees and use more than 10,000 pounds of a reported chemical each year.

*How were the reporting facilities selected?*

The federal law designated the facilities. Minnesota slightly 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 (ERC) at 651-297-7372. 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 law, 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 includes 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 360 "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 Emergency Response Commission 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 Emergency Response Commission 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 Emergency Response Commission 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 set up an Emergency Response Commission. The Commission was established in Minnesota Statutes through the enactment of the Minnesota Emergency Planning and Community Right-to-Know Act in July, 1989.

The Emergency Response Commission is a 22 member organization which includes representatives of fire, law enforcement, medical services, emergency management, business and industry, labor, community groups, elected officials, and four state agencies (see attachment 1). The Office of the Emergency Response Commission is part of the Minnesota Department of Public Safety, Division of Emergency Management. A broad perspective is crucial to the oversight role of the Commission, because information available under Title III involves a number of environmental and public safety programs.

Among the Commission's duties are to:

- Coordinate the Title III emergency planning process within the state.
- Appoint Regional Review Committees and Local Emergency Planning Committees for assuring the preparation of effective emergency plans.
- Provide information about particular chemicals or facilities necessary for the planning activities of political subdivisions.
- Establish procedures for receiving and processing public requests for information collected under Title III.

Within the state, the Commission has created seven Regional Review Committees to review and evaluate the Title III emergency planning information prepared by political subdivisions within each of their districts (see attachment 2). A Regional Review Committee has nine members representing emergency response organizations, facilities regulated under the law, and the public.

**Attachment 1:           Membership of the Minnesota Emergency Response Commission**

**Member**

**Representing**

Paul Aasen

Department of Public Safety

Don Anderson

Emergency Managers

David Augustin

Emergency Medical Services

David Benforado

Public

Robert Einweck

Department of Health

E. Roscoe Evavold

Business and Industry

Robert Ferderer

Public

Stephen Lee

Pollution Control Agency

Paul Liemandt

Department of Agriculture

Terry Mitchell

Wastewater Treatment Operators

Craig Sallstrom

Business and Industry

David Senjem

Business and Industry

Dennis Sershen

Business and Industry

Ray Stordahl

Public

John Wallace

Professional Firefighters

**Attachment 2: Membership of the Minnesota Regional Review Committees**

**DISTRICT 1 (SE)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Alfred Holtan	Wabasha Cty. Emg. Mgt.	Wabasha, Wabasha
Ruth Small	Citizen	Rochester, Olmsted
Michael Shulman	Community Group	Rochester, Olmsted

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Gary Fried	Goodhue Cty. Emg. Mgt.	Red Wing, Goodhue
Duane Sprick	Lake City Fire Dept.	Lake City, Wabasha
Troy Gies	Emergency Responders	St Peter, Nicollet

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Richard Schultz*	Ag Dealer	Plainview, Wabasha
Raymond A. Truelson**	Wenger Corp.	Owatonna, Steele
Glen Seresse	Marigold Foods	Rochester, Olmsted

**DISTRICT 2 (NE)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Richard (Rik) Jordan	Media	Duluth, St. Louis
Norbert Norman	Citizen	Duluth, St. Louis
Robert Wilhelm	Itasca Co. Bd. Of Comm.	Deer River, Itasca

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Tim Catlin	Aitkin Cty. Sheriff/Emg. Mgt.	Aitkin, Aitkin
Stephen Durst	St. Mary's Med Ctr.	Duluth, St. Louis
Eugene Mannelin**	Deer River Fire Dept.	Deer River, Itasca

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Curtis Anderson	Mississippi Transport, Inc.	Esko, Carlton
Daniel Menor	Georgia Pacific Corp.	Duluth, St. Louis
Steven Starkovich	US Steel Miinntac	Mt. Iron, St. Louis

**DISTRICT 3 (NW)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
John (Jack) Murray**	County Commissioner	Detroit Lakes, Becker
Richard Marsolek	Bemidji State University	Bemidji, Beltrami Donald
Jorstad	Broadcast Media	Thief River Falls, Pennington

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
William Rabe	Bemidji Fire Dept.	Bemidji, Beltrami
Martin Soeth	Moorhead Fire & Rescue	Moorhead, Clay
Gracia Nelson	Emergency Responders	Roseau, Roseau

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Gregory Peterson*	Marvin Windows & Doors	Baudette, Lake of the Woods

Marc Valenzuela  
David Kirkeby

Busch Agricultural Resources  
Farmers Union Oil

Moorhead, Clay  
Thief River Falls,  
Pennington

**DISTRICT 4 (WC)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Duane Grandy Gerald Mahon	County Commissioner Community	Sauk Rapids, Benton St. Cloud, Stearns

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Norbert Weirens Dennis Stark James Neal	American Red Cross Alexandria Fire Dept. Stevens Cty. Emg. Svcs.	St. Cloud, Stearns Alexandria, Douglas Morris, Stevens

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Paula Andenas Karjalahti James Holthaus* Stephen Danielson**	Jack Frost, Inc. NSP Crest Chemicals, Inc.	Elk River, Sherburne St. Cloud, Sherburne Campbell, Wilkin

**DISTRICT 5 (SW)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Vacant David Benson Glen Ward	Health Services Cty. Commissioner County Sheriff	Bigelow, Nobles Windom, Cottonwood

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Brad Emmans Harlan Nepp* John Baerg**	Hutchinson Fire Chief Cty. Emg. Mgt. Director Ambulance Service	Hutchinson, Mcleod Pipestone, Pipestone St. James, Watonwan

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Janet Hagen	Zytec Corp.	Redwood Falls, Redwood
Joseph Schaffer Roger Breyfogle	Rosen's Inc. Cottonwood Coop. Oil	Fairmont, Martin Cottonwood, Lyon

**DISTRICT 6 (Metro East)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
James Bukowski Bob Klenotich	West Side Citizen's Community	St. Paul, Ramsey Eden Prairie, Hennepin
Lowell Ludford	Citizen	St. Anthony, Hennepin

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
William Holton* Rex Weber	Fire Department Metro Airport Fire Dept.	Apple Valley, Dakota Mendota Heights, Dakota

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Bud Berry** Doug Marsh JD Payne, Jr.	3M H.B. Fuller CF Industries, Inc.	Maplewood, Ramsey St. Paul, Ramsey Hampton, Dakota

**DISTRICT 7 (Metro West)**

**Public (Elected Official, Media, Community)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Tim Turnbull	Hennepin Cty. Emg. Mgt.	Elk River, Anoka
Vacant	---	---
Mark Nagel	City of Anoka	Anoka, Anoka

**Responder (Law Enforcement, Firefighting, Civil Defense, First Aid, Health, Local Environmental, Hospital, and Transportation)**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
Kurt Kramer*	North Memorial Medical Ctr.	Robbinsdale, Hennepin
Scott Harr	Chanhassen Emg. Mgt. Director	Chanhassen, Hennepin
Richard Turner	Mpls. Fire, Mpls. Emg. Prep. Dir.	Minneapolis, Hennepin

**Facility Owner or Operator**

<u>Member</u>	<u>Representing</u>	<u>City/County</u>
David Carlson	McLaughlin, Gormley, King	Minneapolis, Hennepin
David Brickley**	Electrochemicals, Inc.	Maple Plain, Hennepin
Brad Hoium	Advanced Flex, Inc.	Minnetonka, Hennepin

\*Chairperson

\*\* Vice-Chairperson

## **II. Chair's Report: A Summary of the 1998 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 Emergency Response Commission (ERC) and the U.S. Environmental Protection Agency (EPA) using the EPA Form R.

The Minnesota Legislature required additional facilities in 14 non-manufacturing sectors to begin reporting in 1994. In addition, 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 and are included in this report. Some of the industry groups are included in both the state and federal regulation. In this case, the federal regulation takes precedent.

The 1990 Minnesota Legislature passed 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 ERC.

The ERC 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 ERC for calendar year 1998:

In 1998, 418 facilities reported releases of 32.2 million pounds to the environment, while the total amount of chemicals managed was 298.2 million pounds. This compares to 397 facilities reporting 20.2 million pounds of environmental releases in 1997 with 262.1 million pounds of chemicals being managed. In 1996, 425 facilities reported 22 million pounds of environmental releases and 236.2 million pounds of chemicals managed (Figures 1 & 3). For the 1998 reporting year, 139 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 61% of total environmental releases. Based on the ranking in Part IV, Attachment 2, the top twenty facilities account for 86% of total chemicals managed.

The chemicals most commonly managed were Lead, Methyl Ethyl Ketone, Methanol, Toluene, and Xylene. The chemicals most commonly released to the environment were Barium Compounds, n-Hexane, Manganese Compounds, Nitrate Compounds and Zinc Compounds.

346 facilities filed 924 Pollution Prevention Progress Reports for 1998. Each Progress Report represents a pollution prevention objective for a chemical. Of the reports filed, 49% established a numerical objective and 51% established non-numeric objectives. 48% of the Progress Reports indicated the objectives have been met

and 52% 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; concerns that product quality may decline as a result of source reduction, technical limitations of the production process, and that pollution prevention was previously implemented, therefore, additional reduction does not appear to be technically feasible.

The top three chemicals in terms of total pounds of air releases were Xylene, n-Hexane, and Toluene. The top three chemicals in terms of hazard potential were Lead, Copper, and Chromium (total).

Many TRI facilities continue to make progress in reducing chemical releases and overall usage of toxic chemicals. These reductions are reflected in this report on an annual basis. These results truly indicate that significant corporate efforts in proactive environmental excellence and leadership are occurring in Minnesota.

Through environmental awareness, positive corporate environmental citizenship, technology sharing, and partnerships with regulatory agencies, Minnesota is moving toward turn of the century standards that will set a benchmark for the rest of the nation to follow.

Minnesota companies on the cutting edge of technology have realized the vision that reducing pollution in our air, soil, and water not only provides economic opportunities, but secures an environment that will benefit and be enjoyed by our children and future generations.

It is only through data collection like the TRI and pollution prevention reports that measurable results can be attained. When this data is combined with air toxics indexing information and potential health effects, then we know where we have been, where we are, and where we need to go to make Minnesota a better place.

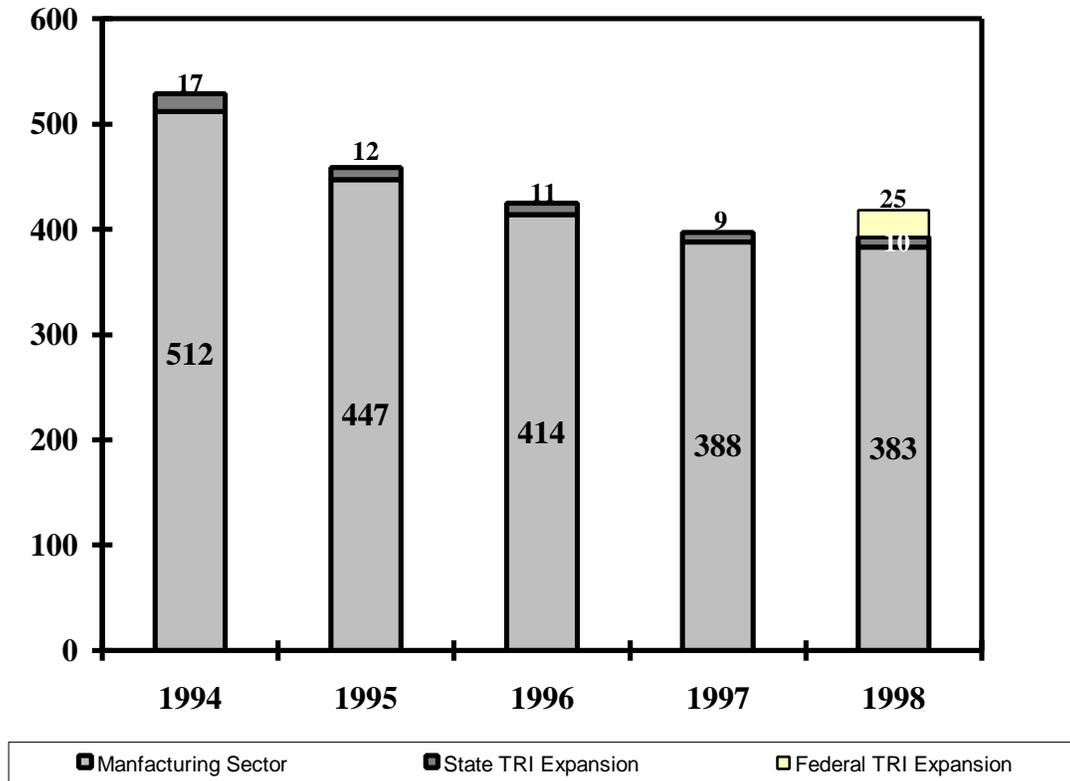
As we enter into the next century, the Minnesota Emergency Response Commission will accelerate its' leadership role to build a stronger and more efficient partnership with business, the general public and existing regulatory agencies. Protecting and improving the quality of our environment is the responsibility of everyone that lives and works in the great State of Minnesota. By working together, we can and will make our communities a safer and better place to live, work, and grow!

Respectfully submitted to the citizens of Minnesota on behalf of the Minnesota Emergency Response Commission,

Dennis J. Sershen, CHMM  
Chair

### III. Summary of Chemical Information Reported Under SARA Title III

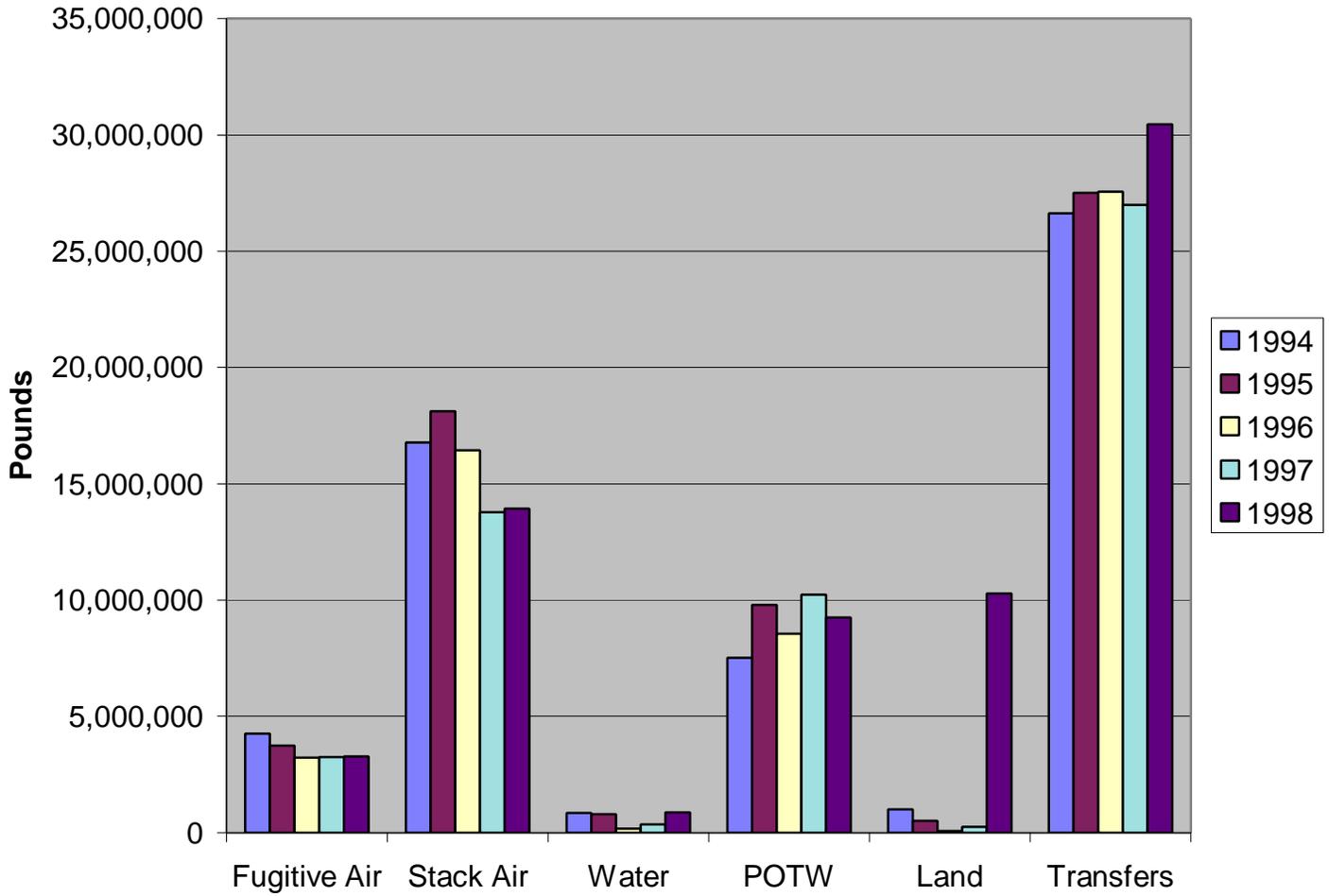
Figure 1: Number of Facilities reporting under SARA Title III, Section 313



### 1998 Right-To-Know Chemical Information Report

Minnesota Emergency Response Commission

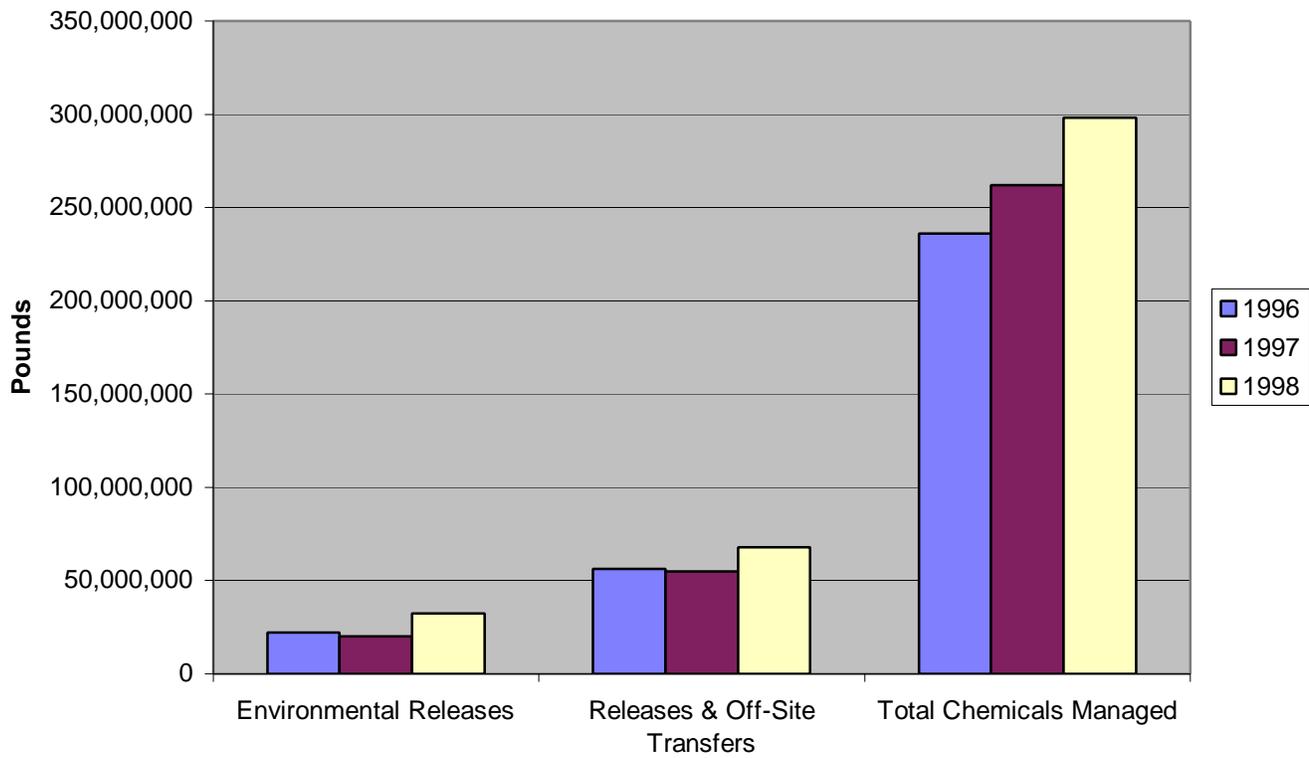
**Figure 2: Total Releases and Transfers by Medium (Sections 5 & 6 of Form R)**



**1998 Right-To-Know Chemical Information Report**

Minnesota Emergency Response Commission

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



**1998 Right-To-Know Chemical Information Report**

Minnesota Emergency Response Commission

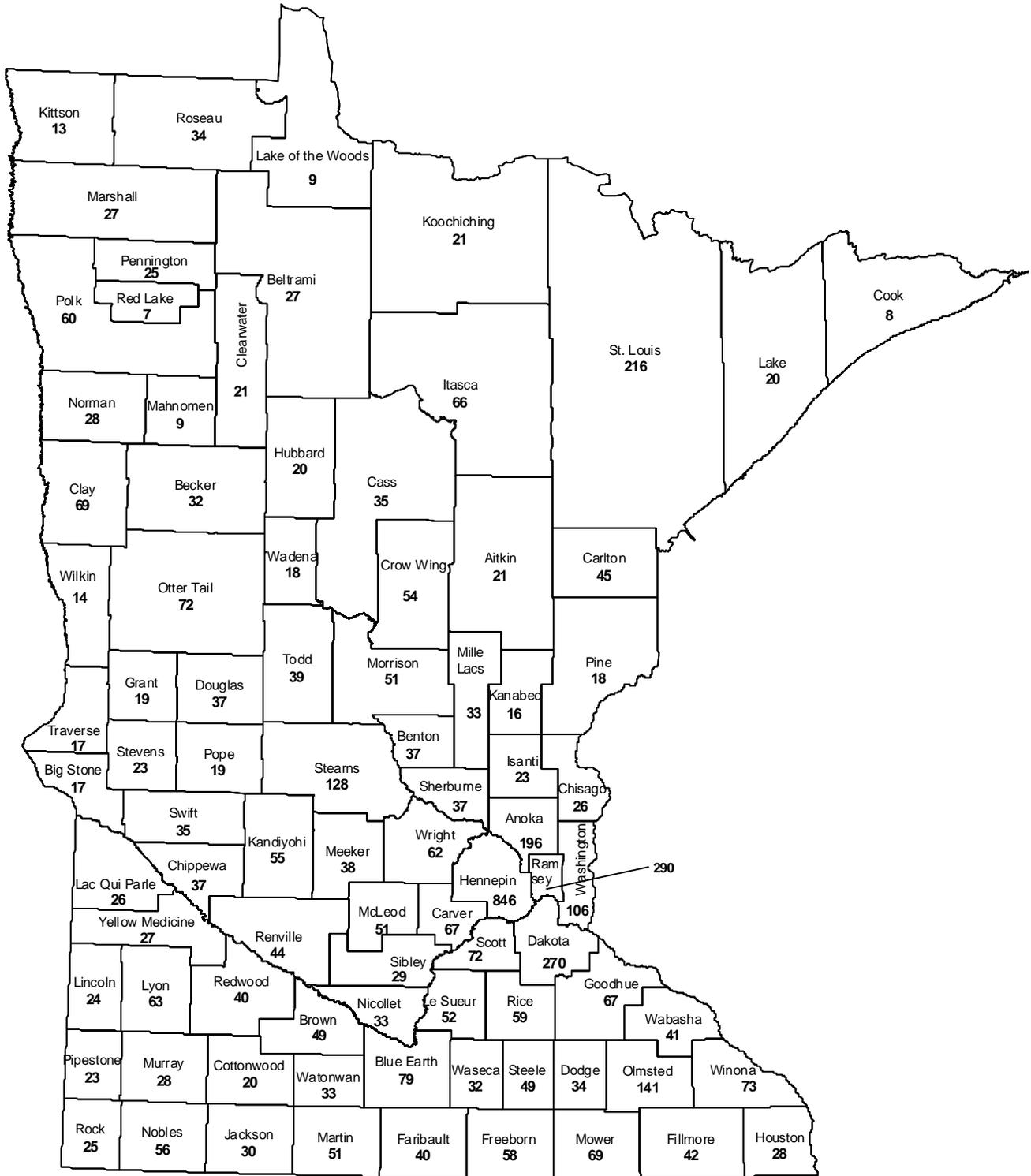
Figure 4: Facilities Filing Toxic Release Inventory Reports by County



1998 Right-To-Know Chemical Information Report

Minnesota Emergency Response Commission

Figure 5: Facilities Filing Chemical Storage Reports by County



1998 Right-To-Know Chemical Information Report

Minnesota Emergency Response Commission

#### **IV. Overview: 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 1998. Reports from manufacturing facilities are submitted to both the Emergency Response Commission 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 Commission.

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 ERC 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

- 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 491 to 505 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.

**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, as well as the exemptions available under the federal Act, must report chemical releases and transfers to the Emergency Response Commission. Reports for the expanded group of facilities were first received by July 1, 1994, covering releases and transfers for the 1993 reporting year:

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

Section 313 of the Act was written primarily for the manufacturing sector. In order to effectively

implement the new legislation, the Emergency Response Commission had to make certain interpretations of the federal Act as it applied to the Minnesota expansion. For example, the Commission 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 Commission 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. Commission Item 93-3 defines the process by which a petition will be evaluated and acted upon.

The Commission received a petition from SIC Code 1011 (Iron Ore Mining) requesting an exemption from Toxic Release Inventory reporting. Commission 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 Commission accepted the petition based on the recommendation from Commission staff. Based on the Commission's findings, EPA did not include SIC Code 1011 in the federal TRI expansion. The federal expansion is discussed in the next section.

- 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 Commission exempting itself from the reporting requirements. The Commission received written certifications from the following facilities:

<b><u>Facility Name</u></b> (year of certification)	<b><u>City</u></b>	<b><u>County</u></b>
Metropolitan Waste Control Commission - Chaska (1993)	Chaska	Carver
Metropolitan Waste Control Commission - Seneca(1993)	Eagan	Dakota
Metropolitan Waste Control Commission - Empire(1993)	Farmington	Dakota
Metropolitan Waste Control Commission - Hastings(1993)	Hastings	Dakota
NSP - Red Wing Plant(1993)	Red Wing	Goodhue
NSP - Prairie Island Nuclear Plant(1993)	Welch	Goodhue

National Steel Pellet Co.(1994)	Keewatin	Itasca
Cyprus Northshore Mining(1993)	Silver Bay	Lake
GenEx - Roseville Plant(1993)	Roseville	Ramsey
Metropolitan Waste Control Commission - Metro(1993)	St. Paul	Ramsey
Metropolitan Waste Control Commission - Blue Lake(1993)	Shakopee	Scott
M.L. Hibbard/Duluth Steam District No. 2(1994)	Duluth	St. Louis
Eveleth Mines(1994)	Eveleth	St. Louis
Hibbing Taconite Company(1994)	Hibbing	St. Louis
Public Utilities Commission(1994)	Hibbing	St. Louis
LTV Steel Mining Company(1994)	Hoyt Lakes	St. Louis
U.S. Steel Minntac(1994)	Mt. Iron	St. Louis
Inland Steel Mining(1994)	Virginia	St. Louis
Minnesota Power(1993)	Duluth	St. Louis
Western Lake Superior Sanitary District(1993)	Duluth	St. Louis
Metropolitan Waste Control Commission - Cottage Grove(1993)	Cottage Grove	Washington
Metropolitan Waste Control Commission - Stillwater(1993)	Stillwater	Washington

Notes:

The Metropolitan Waste Control Commission plant in Bayport and Rosemount did not meet the employee and chemical usage criteria and therefore are not subject to the reporting or certification requirements.

### **C. Federal TRI Expansion**

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, as well as the exemptions available under the federal Act, must report chemical releases and transfers to the EPA and ERC. Reports from these facilities were first received by July 1, 1999, covering releases and transfers for the 1998 reporting year:

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

#### **D. 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 cross-check 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 Section

313 data provides 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.

#### **E. Exposure and Risk**

The 32 million pounds of chemical releases directly to the air, water, and land and the 298 million pounds of chemicals managed in 1998 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 Emergency Response Commission at (651) 297-7372.

#### **F. 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 Emergency Response Commission. Information from these progress reports is included in this report starting on page 133.

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

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

**G. Public Access to TRI Data**

The Toxic Release Inventory is updated annually. TRI reports filed for 1987-1998 are available from a number of sources. The Minnesota Emergency Response Commission will make data and reports from individual facilities in Minnesota available at its office located at: 444 Cedar Street, Suite 223, St. Paul, MN 55101. For TRI information covering all fifty states, please contact the U.S. Environmental Protection Agency through its "Emergency Planning and Community Right-to-Know Hotline" at 1-800-535-0202.

For additional information about the law or its reporting requirements, please contact the Minnesota Emergency Response Commission at 651-297-7372 or the EPA Title III Hotline at 1-800-535-0202.

**Attachment 1: Top 20 Facilities Ranked By Total Chemicals Released  
(Section 8.1) for Calendar Year 1998**

**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  
Emergency Response Commission**

**(Amount in Pounds)**

<b>County</b>	<b>ERC ID</b>	<b>Facility</b>	<b>Quantity Released (8.1)</b>	<b>Recovery On-site (8.2)</b>	<b>Recovery Off-site (8.3)</b>	<b>Recycled On-site (8.4)</b>	<b>Recycled Off-site (8.5)</b>	<b>Treated On-site (8.6)</b>	<b>Treated Off-site (8.7)</b>	<b>Total Chemicals Managed</b>
Sherburne	710090001	NSP - SHERCO PLANT 13999 INDUSTRIAL BLVD BECKER, MN 55308	<b><u>6,709,700</u></b>	0	0	0	0	589,100	0	7,298,800
Itasca	310680001	BOSWELL ENERGY CENTER - MN POWER 1200 NW 3RD ST COHASSET, MN 55721	<b><u>1,727,000</u></b>	0	0	0	0	122,000	0	1,849,000
Ramsey	620700334	NORTH STAR RECYCLING-MINNESOTA 1678 RED ROCK RD ST. PAUL, MN 55165	<b><u>1,241,207</u></b>	0	0	0	0	0	0	1,241,207
Dakota	191450005	KOCH PETROLEUM GROUP 12555 CLAYTON BLVD ROSEMOUNT, MN 55068	<b><u>1,105,721</u></b>	0	0	164,650	99,532	1,283,150	348	2,653,401
Ramsey	620700020	FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	<b><u>866,379</u></b>	0	0	0	874,096	428,900	15,900	2,185,275
Washington	820300001	3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	<b><u>845,805</u></b>	1,291,640	454,480	0	1,101,552	15,203,124	145,049	19,041,650
Sherburne	710090018	BECKER RDF ASH LANDFILL 13700 SHERBURNE AVE S BECKER, MN 55308	<b><u>743,951</u></b>	0	0	0	0	0	0	743,951
Blue Earth	071000005	CENEX HARVEST STATES 2020 S RIVERFRONT DR MANKATO, MN 560023247	<b><u>730,000</u></b>	0	0	0	17,000	16,200	600	763,800
Washington	820150005	NSP - A.S. KING 1103 KING PLANT RD BAYPORT, MN 55003	<b><u>635,300</u></b>	0	0	0	0	83,000	0	718,300
Koochiching	360100001	BOISE CASCADE CORP. 400 2ND ST INTL FALLS, MN 56649	<b><u>602,410</u></b>	3,040,000	0	0	0	4,658,000	0	8,300,410

**Top 20 Facilities Ranked By Total Chemicals Released (Section 8.1) for Calendar Year 1998**

**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  
Emergency Response Commission**

**(Amount in Pounds)**

<b>County</b>	<b>ERC ID</b>	<b>Facility</b>	<b>Quantity Released (8.1)</b>	<b>Recovery On-site (8.2)</b>	<b>Recovery Off-site (8.3)</b>	<b>Recycled On-site (8.4)</b>	<b>Recycled Off-site (8.5)</b>	<b>Treated On-site (8.6)</b>	<b>Treated Off-site (8.7)</b>	<b>Total Chemicals Managed</b>
McLeod	430550003	MINNESOTA MINING & MFG. - HUTCHINSON 915 HWY 22 S HUTCHINSON, MN 553509431	<b><u>579,836</u></b>	0	59,390	15,091,000	1,100,000	3,193,000	406,900	20,430,126
Sherburne	710050001	CRYSTAL CABINET WORKS, INC. 1100 CRYSTAL DRV PRINCETON, MN 55371	<b><u>515,312</u></b>	0	0	0	163,123	0	0	678,435
Olmsted	550950074	ROCHESTER PUBLIC UTILITIES-SILVER LAKE 425 W SILVER LAKE DRV NE ROCHESTER, MN 559063675	<b><u>513,100</u></b>	0	0	0	0	0	0	513,100
Blue Earth	071000001	ARCHER DANIELS MIDLAND CO. 3RD & HARPER ST MANKATO, MN 56001	<b><u>485,350</u></b>	0	0	0	3,061	0	980	489,391
Ramsey	620700045	3M COMPANY 900 BUSH AVE ST. PAUL, MN 551441000	<b><u>459,153</u></b>	228,648	18,359	0	24,200	2,308,829	130,163	3,169,352
Stearns	732300008	FRIGIDAIRE HOME PRODUCTS-FREEZERS 701 N 33RD AVE ST. CLOUD, MN 56303	<b><u>411,035</u></b>	0	0	0	36,000	0	3,500	450,535
Dakota	190250016	GOPHER RESOURCE CORP. 3385 S HWY 149 EAGAN, MN 55121	<b><u>378,000</u></b>	0	0	164,090,000	0	0	0	164,468,000
Hennepin	271350064	NSP - RIVERSIDE PLANT 3100 MARSHALL ST NE MINNEAPOLIS, MN 55418	<b><u>376,000</u></b>	0	0	0	0	81,000	0	457,000
Polk	600750002	AMERICAN CRYSTAL SUGAR CO. BUSINESS HWY 2 E PO BOX 357 EAST GRAND FORKS, MN 56721	<b><u>367,000</u></b>	0	0	0	0	50,000	1,009	418,009
Carlton	090400003	POTLATCH CORP. 2201 AVE B CLOQUET, MN 55720	<b><u>361,174</u></b>	1,063,021	0	0	0	0	4,494,731	5,918,926

**Attachment 2: Top 20 Facilities Ranked By Total Chemicals Managed  
(Sections 8.1-8.7) for Calendar Year 1998**

**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  
Emergency Response Commission  
(Amount in Pounds)**

<b>County</b>	<b>ERC ID</b>	<b>Facility</b>	<b>Quantity Released (8.1)</b>	<b>Recovery On-site (8.2)</b>	<b>Recovery Off-site (8.3)</b>	<b>Recycled On-site (8.4)</b>	<b>Recycled Off-site (8.5)</b>	<b>Treated On-site (8.6)</b>	<b>Treated Off-site (8.7)</b>	<b>Total Chemicals Managed</b>
Dakota	190250016	GOPHER RESOURCE CORP. 3385 S HWY 149 EAGAN, MN 55121	378,000	0	0	164,090,000	0	0	0	<b><u>164,468,000</u></b>
McLeod	430550003	MINNESOTA MINING & MFG. - HUTCHINSON 915 HWY 22 S HUTCHINSON, MN 553509431	579,836	0	59,390	15,091,000	1,100,000	3,193,000	406,900	<b><u>20,430,126</u></b>
Washington	820300001	3M COTTAGE GROVE CENTER 10746 INNOVATION RD COTTAGE GROVE, MN 55016	845,805	1,291,640	454,480	0	1,101,552	15,203,124	145,049	<b><u>19,041,650</u></b>
Koochiching	360100001	BOISE CASCADE CORP. 400 2ND ST INTL FALLS, MN 56649	602,410	3,040,000	0	0	0	4,658,000	0	<b><u>8,300,410</u></b>
Sherburne	710090001	NSP - SHERCO PLANT 13999 INDUSTRIAL BLVD BECKER, MN 55308	6,709,700	0	0	0	0	589,100	0	<b><u>7,298,800</u></b>
Carlton	090400003	POTLATCH CORP. 2201 AVE B CLOQUET, MN 55720	361,174	1,063,021	0	0	0	0	4,494,731	<b><u>5,918,926</u></b>
Ramsey	620600023	U.S. FILTER RECOVERY SERVICES INC. 2430 ROSE PLACE ROSEVILLE, MN 55113	966	0	0	4,030,989	1,057,000	78,543	11,698	<b><u>5,179,196</u></b>
Ramsey	620700051	NORTH STAR STEEL-MINNESOTA 1678 RED ROCK RD ST. PAUL, MN 55119	41,717	0	0	0	4,466,638	0	0	<b><u>4,508,355</u></b>
Ramsey	620700045	3M COMPANY 900 BUSH AVE ST. PAUL, MN 551441000	459,153	228,648	18,359	0	24,200	2,308,829	130,163	<b><u>3,169,352</u></b>

**Top 20 Facilities Ranked By Total Chemicals Managed  
(Sections 8.1-8.7) for Calendar Year 1998**

**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  
Emergency Response Commission  
(Amount in Pounds)**

<b>County</b>	<b>ERC ID</b>	<b>Facility</b>	<b>Quantity Released (8.1)</b>	<b>Recovery On-site (8.2)</b>	<b>Recovery Off-site (8.3)</b>	<b>Recycled On-site (8.4)</b>	<b>Recycled Off-site (8.5)</b>	<b>Treated On-site (8.6)</b>	<b>Treated Off-site (8.7)</b>	<b>Total Chemicals Managed</b>
Dakota	191450005	KOCH PETROLEUM GROUP 12555 CLAYTON BLVD ROSEMOUNT, MN 55068	1,105,721	0	0	164,650	99,532	1,283,150	348	<b><u>2,653,401</u></b>
Rice	660600002	SHELDAHL, INC. - EAST FACILITY 805 HWY 3 N NORTHFIELD, MN 55057	83,662	0	109,979	0	998,349	1,058,815	15,188	<b><u>2,265,993</u></b>
Ramsey	620700020	FORD - TWIN CITIES ASSEMBLY PLANT 966 S MISSISSIPPI RIVER BLVD ST. PAUL, MN 55116	866,379	0	0	0	874,096	428,900	15,900	<b><u>2,185,275</u></b>
Itasca	310680001	BOSWELL ENERGY CENTER - MN POWER 1200 NW 3RD ST COHASSET, MN 55721	1,727,000	0	0	0	0	122,000	0	<b><u>1,849,000</u></b>
Ramsey	620950030	WATER GREMLIN CO. 1610 WHITAKER AVE WHITE BEAR LAKE, MN 55110	110,100	0	0	34,000	1,508,500	0	2,000	<b><u>1,654,600</u></b>
Olmsted	550950007	INTERNATIONAL BUSINESS MACHINES CORP. 3605 HWY 52 N ROCHESTER, MN 55901	109,967	0	0	0	87,630	717,000	688,550	<b><u>1,603,147</u></b>
Stearns	731500003	KRAFT FOODS, INC. 1000 E KRAFT DRV MELROSE, MN 56352	0	0	0	0	0	763,234	726,357	<b><u>1,489,591</u></b>
Hennepin	270600002	FILMTEC CORP. 7200 OHMS LANE EDINA, MN 55439	10,488	0	0	0	0	0	1,330,480	<b><u>1,340,968</u></b>
Washington	821650001	MARATHON ASHLAND PETROLEUM, LLC 100 W 3RD AVE ST. PAUL PARK, MN 55071	141,526	0	20,091	678,772	6,402	345,710	72,840	<b><u>1,265,341</u></b>

**Top 20 Facilities Ranked By Total Chemicals Managed  
(Sections 8.1-8.7) for Calendar Year 1998**

**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  
Emergency Response Commission  
(Amount in Pounds)**

<b>County</b>	<b>ERC ID</b>	<b>Facility</b>	<b>Quantity Released (8.1)</b>	<b>Recovery On-site (8.2)</b>	<b>Recovery Off -site (8.3)</b>	<b>Recycled On-site (8.4)</b>	<b>Recycled Off -site (8.5)</b>	<b>Treated On-site (8.6)</b>	<b>Treated Off -site (8.7)</b>	<b>Total Chemicals Managed</b>
Ramsey	620700334	NORTH STAR RECYCLING-MINNESOTA 1678 RED ROCK RD ST. PAUL, MN 55165	1,241,207	0	0	0	0	0	0	<b><u>1,241,207</u></b>
Hennepin	271350092	PIONEER METAL FINISHING 1717 W RIVER RD N MINNEAPOLIS, MN 55411	9,137	0	0	0	99,225	539,566	495,800	<b><u>1,143,728</u></b>

Attachment 3: Statewide Listing of Amount of Releases, Transfers, and Total Chemicals Managed for the Year 1998

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  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	Recovery On-site (8.2)	Recovery Off-site (8.3)	Recycled On-site (8.4)	Recycled Off-site (8.5)	Treated On-site (8.6)	Treated Off-site (8.7)	Total Chemicals Managed
<u>Anoka County, City of ANOKA -- FEDERAL CARTRIDGE COMPANY --900 EHLEN DRV --ERCID -- 020050004</u>								
Lead Compounds	2,000	0	0	0	35,500	0	0	37,500
Copper Compounds	7,920	0	0	0	350	0	0	8,270
Ethylene Glycol	30	0	0	0	0	0	163,400	163,430
Nitrate compounds (water dissociable)	0	0	0	0	0	0	23,100	23,100
Barium Compounds	1,450	0	0	0	250	0	0	1,700
<b>Totals</b>	<b>11,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,100</b>	<b>0</b>	<b>186,500</b>	<b>234,000</b>
<u>Anoka County, City of ANOKA -- HOFFMAN ENCLOSURES INC. - MAIN PLANT --900 EHLEN DR --ERCID -- 020050053</u>								
Xylene (mixed isomers)	18,045	9,655	932	0	0	0	0	28,632
Methyl Ethyl Ketone	3,579	0	15,617	5,957	0	0	0	25,153
N-butyl Alcohol	10,404	10,303	10	0	0	0	0	20,717
Glycol Ethers	14,179	13,950	322	0	0	0	808	29,259
Toluene	9,067	1,609	19,165	7,319	0	0	0	37,160
<b>Totals</b>	<b>55,274</b>	<b>35,517</b>	<b>36,046</b>	<b>13,276</b>	<b>0</b>	<b>0</b>	<b>808</b>	<b>140,921</b>
<u>Anoka County, City of ANOKA -- IMI CORNELIUS INC. --ONE CORNELIUS PLACE --ERCID -- 020050003</u>								
Chromium	45	0	0	0	58,600	0	0	58,645
Nitric Acid	30	0	0	0	0	27,000	0	27,030
Nickel	25	0	0	0	26,900	0	0	26,925
Trichloroethylene	10,500	0	0	0	0	0	2,700	13,200
Copper	4	0	0	0	29,700	0	0	29,704
<b>Totals</b>	<b>10,604</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>115,200</b>	<b>27,000</b>	<b>2,700</b>	<b>155,504</b>
<u>Anoka County, City of ANOKA -- LUND INDUSTRIES INC --911 LUND BLVD --ERCID -- 020050050</u>								
Styrene	120,000	0	0	0	0	0	3,900	123,900
<b>Totals</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,900</b>	<b>123,900</b>
<u>Anoka County, City of ANOKA -- PROFESSIONAL PLATING --2625 9TH AVE N --ERCID -- 020050005</u>								
Nitric Acid	0	0	0	0	0	28,700	500	29,200
Nitrate Compounds	0	0	0	0	0	0	28,200	28,200
Phosphoric Acid	0	0	0	0	0	31,700	0	31,700
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,400</b>	<b>28,700</b>	<b>89,100</b>
<u>Anoka County, City of BLAINE -- ARROW CRYOGENICS --1671 93RD LANE NE --ERCID -- 020200002</u>								
Dichloromethane	33,380	0	220	33,600	0	0	0	67,200

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	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
<b>Totals</b>	<b>33,380</b>	<b>0</b>	<b>220</b>	<b>33,600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67,200</b>
<u>Anoka County, City of BLAINE -- CYLINDER CITY, INC. --1532 93RD LANE NE --ERCID -- 020200071</u>								
Copper	5	0	0	0	7,000	0	0	7,005
Nickel	20	0	0	0	30,000	0	0	30,020
Chromium	20	0	0	0	30,000	0	0	30,020
<b>Totals</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67,000</b>	<b>0</b>	<b>0</b>	<b>67,045</b>
<u>Anoka County, City of BLAINE -- RMS COMPANY --8600 EVERGREEN BLVD --ERCID -- 020200067</u>								
Chromium	21,808	0	0	0	0	0	0	21,808
<b>Totals</b>	<b>21,808</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,808</b>
<u>Anoka County, City of BLAINE -- SAFETY-KLEEN CORP. --9261 ISANTI ST NE --ERCID -- 020200027</u>								
Ethylene Glycol	3	0	0	0	95,410	0	0	95,413
<b>Totals</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>95,410</b>	<b>0</b>	<b>0</b>	<b>95,413</b>
<u>Anoka County, City of CIRCLE PINES -- PDI, INC. --3760 FLOWERFIELD RD --ERCID -- 020200005</u>								
Toluene	1,303	0	0	0	0	0	0	1,303
N-hexane	800	0	0	0	0	0	0	800
Methyl Ethyl Ketone	834	0	0	0	0	0	0	834
<b>Totals</b>	<b>2,937</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,937</b>
<u>Anoka County, City of COLUMBIA HEIGHTS -- INVEST CAST, INC. --716 39TH AVE NE --ERCID -- 020400013</u>								
Copper	314	0	0	16,500	499	0	0	17,313
Chromium	4,289	0	0	58,380	6,798	0	0	69,467
Nickel	3,335	0	0	44,796	5,301	0	0	53,432
<b>Totals</b>	<b>7,938</b>	<b>0</b>	<b>0</b>	<b>119,676</b>	<b>12,598</b>	<b>0</b>	<b>0</b>	<b>140,212</b>
<u>Anoka County, City of COON RAPIDS -- MIDWEST FINISHING --9289 EVERGREEN BLVD --ERCID -- 020500002</u>								
Nitric Acid	89	0	0	0	0	17,985	0	18,074
Phosphoric Acid	0	0	0	0	0	51,000	0	51,000
<b>Totals</b>	<b>89</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>68,985</b>	<b>0</b>	<b>69,074</b>
<u>Anoka County, City of FRIDLEY -- AMERICAN CONVERTERS, INC. --5360 NE MAIN ST --ERCID -- 020550033</u>								
Dichloromethane	22,551	0	0	0	0	0	0	22,551
<b>Totals</b>	<b>22,551</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22,551</b>
<u>Anoka County, City of FRIDLEY -- ARMAMENT SYSTEMS DIV. OF UNITED DEFENSE --4800 E RIVER RD --ERCID -- 020550003</u>								
Copper	515	0	0	0	28,000	0	0	28,515

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

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<b>Totals</b>	<b>515</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,000</b>	<b>0</b>	<b>0</b>	<b>28,515</b>
<u>ANOKA County, City of FRIDLEY -- CARTER-DAY INTERNATIONAL INC. --494 NORTHCO DRIVE NE --ERCID -- 020550075</u>								
Chromium	2	0	0	0	4,528	0	0	4,530
Nickel	2	0	0	0	4,006	0	0	4,008
<b>Totals</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,534</b>	<b>0</b>	<b>0</b>	<b>8,538</b>
<u>Anoka County, City of FRIDLEY -- DUGAS BOWERS PLATING COMPANY --7965 MAIN ST NE --ERCID -- 020550070</u>								
Zinc Compounds	51	0	0	0	41,077	42,786	0	83,914
Cyanide Compounds	0	0	0	0	0	10,210	97	10,307
<b>Totals</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41,077</b>	<b>52,996</b>	<b>97</b>	<b>94,221</b>
<u>Anoka County, City of FRIDLEY -- ECO FINISHING COMPANY --5100 INDUSTRIAL BLVD --ERCID -- 020550069</u>								
Nitric Acid	0	0	0	0	0	40,000	0	40,000
Zinc Compounds	285	0	0	0	38,400	0	0	38,685
Cyanide Compounds	0	0	0	0	0	2,670	23	2,693
Nickel Compounds	412	0	0	0	2,049	0	0	2,461
<b>Totals</b>	<b>697</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40,449</b>	<b>42,670</b>	<b>23</b>	<b>83,839</b>
<u>Anoka County, City of FRIDLEY -- KURT MANUFACTURING CO. --5280 MAIN ST NE --ERCID -- 020550071</u>								
Nitric Acid	0	0	0	0	0	5,236	31,962	37,198
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,236</b>	<b>31,962</b>	<b>37,198</b>
<u>Anoka County, City of FRIDLEY -- KURT MANUFACTURING DIE CAST --7585 HWY 65 --ERCID -- 020550014</u>								
Copper	575	0	0	53,404	11,343	0	0	65,322
<b>Totals</b>	<b>575</b>	<b>0</b>	<b>0</b>	<b>53,404</b>	<b>11,343</b>	<b>0</b>	<b>0</b>	<b>65,322</b>
<u>Anoka County, City of FRIDLEY -- KWIK-FILE, LLC --490 NORTHCO DR NE --ERCID -- 020550066</u>								
N-butyl Alcohol	16,437	0	907	0	0	0	0	17,344
<b>Totals</b>	<b>16,437</b>	<b>0</b>	<b>907</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,344</b>
<u>Anoka County, City of FRIDLEY -- LARSEN'S MFG. CO. --7421 COMMERCE LANE NE --ERCID -- 020550053</u>								
Trichloroethylene	13,810	0	0	0	727	0	0	14,537
<b>Totals</b>	<b>13,810</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>727</b>	<b>0</b>	<b>0</b>	<b>14,537</b>
<u>Anoka County, City of FRIDLEY -- MINNCAST, INC. --200 NE SOUTH COMMERCE CIRCLE --ERCID -- 020550056</u>								
Chromium	1,400	0	0	0	800	0	0	2,200
Nickel	470	0	0	0	800	0	0	1,270
Manganese	660	0	0	0	990	0	0	1,650

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State of Minnesota  
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Emergency Response Commission  
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<b>Totals</b>	<b>2,530</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,590</b>	<b>0</b>	<b>0</b>	<b>5,120</b>
<u>Anoka County, City of FRIDLEY -- ONAN CORP. --1400 73RD AVE NE --ERCID -- 020550009</u>								
Styrene	16,300	0	0	0	0	0	0	16,300
Ethylbenzene	8,900	0	1,300	0	0	0	0	10,200
Glycol Ethers	32,600	0	0	0	0	0	6,900	39,500
Methyl Ethyl Ketone	1,000	0	10,000	0	0	0	0	11,000
Toluene	400	0	3,400	0	0	0	1	3,801
Xylene (mixed isomers)	46,000	0	6,000	0	0	0	1	52,001
<b>Totals</b>	<b>105,200</b>	<b>0</b>	<b>20,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,902</b>	<b>132,802</b>
<u>Anoka County, City of FRIDLEY -- SAFETRAN SYSTEMS --4650 MAIN ST NE --ERCID -- 020550054</u>								
Xylene (mixed isomers)	5,409	0	0	0	398	0	0	5,807
<b>Totals</b>	<b>5,409</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>398</b>	<b>0</b>	<b>0</b>	<b>5,807</b>
<u>Anoka County, City of FRIDLEY -- SPEC PLATING CORPORATION --160 83RD AVE NE --ERCID -- 020550072</u>								
Phosphoric Acid	237	0	0	0	0	12,378	3,185	15,800
Nitric Acid	634	0	0	0	0	17,197	24,409	42,240
<b>Totals</b>	<b>871</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,575</b>	<b>27,594</b>	<b>58,040</b>
<u>Anoka County, City of FRIDLEY -- STYLMARK, INC. --6536 MAIN ST NE --ERCID -- 020550016</u>								
Nitrate Compounds	0	0	0	0	0	0	30,703	30,703
Nitric Acid	1,034	0	0	0	0	22,743	0	23,777
Phosphoric Acid	184	0	0	0	0	18,255	0	18,439
<b>Totals</b>	<b>1,218</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40,998</b>	<b>30,703</b>	<b>72,919</b>
<u>Anoka County, City of RAMSEY -- LIFE FITNESS CONSUMER DIV. --6043 HWY 10 NW --ERCID -- 020950015</u>								
Manganese	46	0	0	0	1,980	0	0	2,026
<b>Totals</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,980</b>	<b>0</b>	<b>0</b>	<b>2,026</b>
<u>Anoka County, City of RAMSEY -- MATE PRECISION TOOLING --6400 INDUSTRY AVE NW --ERCID -- 020950008</u>								
Chromium	0	0	0	0	37,092	0	0	37,092
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37,092</b>	<b>0</b>	<b>0</b>	<b>37,092</b>
<u>Anoka County, City of RAMSEY -- VISION-EASE, INC. --7000 SUNWOOD DRIVE --ERCID -- 020950019</u>								
Methanol	36,061	0	1,813	479	0	0	0	38,353
1,3-dichloro-1,1,2,2,3-pentafluoropropane	20,898	0	0	4,337	0	0	0	25,235
3,3-dichloro-1,1,1,2,2-pentafluoropropane	16,917	0	0	3,511	0	0	0	20,428

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Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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Methyl Ethyl Ketone	23,095	0	16,639	0	0	0	0	39,734
<b>Totals</b>	<b>96,971</b>	<b>0</b>	<b>18,452</b>	<b>8,327</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123,750</b>
<u>Beltrami County, City of BEMIDJI -- GEORGIA-PACIFIC CORPORATION --280 NYMORE BEACH RD NE --ERCID -- 040150001</u>								
Methanol	49,295	0	0	0	0	0	0	49,295
<b>Totals</b>	<b>49,295</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49,295</b>
<u>Beltrami County, City of SOLWAY -- NORTHWOOD PANELBOARD CO. --RT 1 BOX 2650 --ERCID -- 041850001</u>								
Methanol	60,000	0	0	0	0	0	0	60,000
Phenol	160	0	0	0	0	0	0	160
Formaldehyde	14,000	0	0	0	0	0	0	14,000
<b>Totals</b>	<b>74,160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74,160</b>
<u>Benton County, City of FOLEY -- GORECKI MFG., INC. --51 2ND AVE W --ERCID -- 050100015</u>								
Glycol Ethers	150	0	80	0	0	0	570	800
<b>Totals</b>	<b>150</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>570</b>	<b>800</b>
<u>Benton County, City of RICE -- CENTRAL MARBLE PRODUCTS, INC. --10499 HWY 10 NW BOX 357 --ERCID -- 050550002</u>								
Styrene	13,005	0	0	0	0	0	0	13,005
<b>Totals</b>	<b>13,005</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,005</b>
<u>Benton County, City of SARTELL -- CHAMPION INTERNATIONAL CORP. --100 E SARTELL ST --ERCID -- 050720001</u>								
Methanol	24,953	83	0	0	0	17,984	0	43,020
Sulfuric Acid (aerosol forms only)	28,749	0	0	0	0	0	0	28,749
Sodium Dimethyldithiocarbamate	4,864	192	0	0	0	7,352	0	12,408
Nabam	4,864	192	0	0	0	7,352	0	12,408
Glycol Ethers	1,038	854	0	0	0	10,784	0	12,676
Hydrochloric Acid (aerosol forms only)	2,464	0	0	0	0	243,896	0	246,360
Ethylene Glycol	14,340	140	0	0	0	20,420	0	34,900
<b>Totals</b>	<b>81,272</b>	<b>1,461</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>307,788</b>	<b>0</b>	<b>390,521</b>
<u>Benton County, City of SAUK RAPIDS -- X-CEL OPTICAL CO. --806 S BENTON DRV --ERCID -- 050730002</u>								
Trichloroethylene	6,600	0	0	6,000	9,420	0	0	22,020
<b>Totals</b>	<b>6,600</b>	<b>0</b>	<b>0</b>	<b>6,000</b>	<b>9,420</b>	<b>0</b>	<b>0</b>	<b>22,020</b>
<u>Blue Earth County, City of MANKATO -- ARCHER DANIELS MIDLAND CO. --3RD &amp; HARPER ST --ERCID -- 071000001</u>								
Nickel	12,244	0	0	0	3,061	0	0	15,305
N-hexane	234,306	0	0	0	0	0	980	235,286





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Department of Public Safety  
Emergency Response Commission  
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<u>Carver County, City of CHANHASSEN -- ROBERTS AUTOMATIC PRODUCTS --880 LAKE DRV --ERCID -- 100300009</u>								
Dichloromethane	16,060	0	0	3,500	0	0	0	19,560
<b>Totals</b>	<b>16,060</b>	<b>0</b>	<b>0</b>	<b>3,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,560</b>
<u>Carver County, City of CHANHASSEN -- ROSEMOUNT, INC. --8200 MARKET BLVD --ERCID -- 100300008</u>								
Nickel	0	0	0	0	52,758	0	0	52,758
Chromium	2	0	0	0	29,974	0	0	29,976
<b>Totals</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82,732</b>	<b>0</b>	<b>0</b>	<b>82,734</b>
<u>Carver County, City of CHASKA -- BECKMAN COULTER, INC. --1000 LAKE HAZELTINE DRV --ERCID -- 100350025</u>								
Methanol	270	0	13,000	0	0	0	0	13,270
<b>Totals</b>	<b>270</b>	<b>0</b>	<b>13,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,270</b>
<u>Carver County, City of CHASKA -- LAKE REGION MFG. CO. --340 LAKE HAZELTINE DR --ERCID -- 100350017</u>								
Cyclohexane	22,572	0	950	0	0	0	0	23,522
<b>Totals</b>	<b>22,572</b>	<b>0</b>	<b>950</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,522</b>
<u>Carver County, City of CHASKA -- LIFECORE BIOMEDICAL, INC. --3515 LYMAN BLVD --ERCID -- 100350038</u>								
Methanol	100	0	52,543	0	0	0	0	52,643
<b>Totals</b>	<b>100</b>	<b>0</b>	<b>52,543</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,643</b>
<u>Carver County, City of CHASKA -- MAMMOTH INCORPORATED --101 W 82ND ST --ERCID -- 100350041</u>								
Xylene (mixed isomers)	18,803	0	2,890	0	0	0	0	21,693
<b>Totals</b>	<b>18,803</b>	<b>0</b>	<b>2,890</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21,693</b>
<u>Carver County, City of CHASKA -- MANUS PRODUCTS, INC. --315 LAKE HAZELTINE DRV --ERCID -- 100350033</u>								
Xylene (mixed isomers)	6,900	0	0	0	0	0	0	6,900
<b>Totals</b>	<b>6,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,900</b>
<u>Carver County, City of CHASKA -- MCLAUGHLIN GORMLEY KING CO. --4001 PEAVEY RD --ERCID -- 100350008</u>								
Dichloromethane	11,652	0	0	0	32,148	0	0	43,800
Methanol	101	0	1,474	0	0	0	0	1,575
<b>Totals</b>	<b>11,753</b>	<b>0</b>	<b>1,474</b>	<b>0</b>	<b>32,148</b>	<b>0</b>	<b>0</b>	<b>45,375</b>
<u>Carver County, City of CHASKA -- QUALI TECH, INC. (DIVISION 1) --318 LAKE HAZELTINE DRV --ERCID -- 100350031</u>								
Manganese Compounds	357	0	0	8,963	0	0	0	9,320
Copper Compounds	25	0	0	5,651	0	0	0	5,676
Zinc Compounds	305	0	0	11,677	0	0	0	11,982
<b>Totals</b>	<b>687</b>	<b>0</b>	<b>0</b>	<b>26,291</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26,978</b>

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Department of Public Safety  
Emergency Response Commission  
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<u>Carver County, City of CHASKA -- SUPER RADIATOR COILS --104 PEAVEY ROAD --ERCID -- 100350047</u>								
Copper	8	0	0	0	16,802	0	0	16,810
Tetrachloroethylene	101,741	0	5,720	0	0	0	0	107,461
<b>Totals</b>	<b>101,749</b>	<b>0</b>	<b>5,720</b>	<b>0</b>	<b>16,802</b>	<b>0</b>	<b>0</b>	<b>124,271</b>
<u>Carver County, City of WACONIA -- MEDALLION KITCHENS OF MN --180 INDUSTRIAL BLVD --ERCID -- 101000008</u>								
Xylene (mixed isomers)	65,769	0	7,097	0	0	0	0	72,866
Glycol Ethers	15,022	0	1,621	0	0	0	0	16,643
Ethylbenzene	11,774	0	1,271	0	0	0	0	13,045
Toluene	13,825	0	1,492	0	0	0	0	15,317
<b>Totals</b>	<b>106,390</b>	<b>0</b>	<b>11,481</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>117,871</b>
<u>Carver County, City of WACONIA -- PRO-TECH. INC. --902 S.PINE. INDUSTRIAL PARK --ERCID -- 101000001</u>								
Copper Compounds	2	0	0	0	18,552	0	0	18,554
<b>Totals</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,552</b>	<b>0</b>	<b>0</b>	<b>18,554</b>
<u>Cass County, City of BACKUS -- EVELAND'S INC. --HWY 371 N --ERCID -- 110100004</u>								
Styrene	4,030	0	0	0	0	0	0	4,030
<b>Totals</b>	<b>4,030</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,030</b>
<u>Chippewa County, City of GRANITE FALLS -- PLEWS/EDELMANN, STANT CORP. --1021 HWY 212 W --ERCID -- 120250007</u>								
Copper	60	0	0	0	46,269	0	0	46,329
<b>Totals</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,269</b>	<b>0</b>	<b>0</b>	<b>46,329</b>
<u>Chisago County, City of WYOMING -- SUNRISE FIBERGLASS --26467 FALLBROOK AVE --ERCID -- 131050003</u>								
Styrene	30,661	0	0	0	0	0	0	30,661
<b>Totals</b>	<b>30,661</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30,661</b>
<u>Clay County, City of MOORHEAD -- AMERICAN CRYSTAL SUGAR CO. - MOORHEAD --2500 N 11TH ST --ERCID -- 141450014</u>								
Ammonia	180,000	0	0	0	0	18,700	0	198,700
Hydrochloric Acid (aerosol forms only)	500	0	0	0	0	130,000	0	130,500
<b>Totals</b>	<b>180,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148,700</b>	<b>0</b>	<b>329,200</b>
<u>Clay County, City of MOORHEAD -- AMOCO OIL CO. --1101 SE MAIN AVE --ERCID -- 141450005</u>								
Toluene	510	0	0	0	0	132,926	0	133,436
N-hexane	943	0	0	0	0	47,000	0	47,943
Benzene	613	0	0	0	0	49,811	0	50,424
1,2,4-trimethylbenzene	5	0	0	0	0	12,000	0	12,005

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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Xylene (mixed isomers)	115	0	0	0	0	67,000	0	67,115
Ethylbenzene	4	0	0	0	0	14,098	0	14,102
<b>Totals</b>	<b>2,190</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>322,835</b>	<b>0</b>	<b>325,025</b>
<u>Crow Wing County, City of BRAINERD -- ACROMETAL --210 NE 10TH AVE PO BOX 408 --ERCID -- 180150007</u>								
Phenol	521	0	0	473	0	0	0	994
<b>Totals</b>	<b>521</b>	<b>0</b>	<b>0</b>	<b>473</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>994</b>
<u>Crow Wing County, City of BRAINERD -- LARCO, INC. --1902 13TH ST SE --ERCID -- 180150008</u>								
Di(2-ethylhexyl) Phthalate	3,064	0	0	0	0	0	230	3,294
<b>Totals</b>	<b>3,064</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>3,294</b>
<u>Crow Wing County, City of BRAINERD -- NORTH STAR PLATING CO. --2110 S 10TH ST PO BOX 204 --ERCID -- 180150001</u>								
Nickel	81	0	0	0	9,181	0	0	9,262
<b>Totals</b>	<b>81</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,181</b>	<b>0</b>	<b>0</b>	<b>9,262</b>
<u>Crow Wing County, City of DEERWOOD -- PARKER HANNIFIN CORP. --325 FRONT ST --ERCID -- 180540001</u>								
Manganese	2	0	0	0	56,935	0	0	56,937
Lead	2	0	0	0	12,652	0	0	12,654
<b>Totals</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69,587</b>	<b>0</b>	<b>0</b>	<b>69,591</b>
<u>Crow Wing County, City of DEERWOOD -- TRUS JOIST MACMILLAN --CO RD 102 --ERCID -- 180540008</u>								
Diisocyanates (includes only 20 chemicals)	1,005	33,210	0	0	0	0	0	34,215
<b>Totals</b>	<b>1,005</b>	<b>33,210</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,215</b>
<u>Dakota County, City of BURNSVILLE -- NSP - BLACK DOG PLANT --1400 E BLACK DOG RD --ERCID -- 190060002</u>								
Hydrogen Fluoride	25,000	0	0	0	0	25,000	0	50,000
Hydrochloric Acid (aerosol forms only)	6,200	0	0	0	0	25,000	0	31,200
Barium Compounds	150,000	0	0	0	0	0	0	150,000
<b>Totals</b>	<b>181,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>231,200</b>
<u>Dakota County, City of BURNSVILLE -- PRINCESS MARBLE COMPANY --14255 SOUTHCROSS DR --ERCID -- 190060075</u>								
Styrene	22,800	0	0	0	0	0	1,950	24,750
<b>Totals</b>	<b>22,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,950</b>	<b>24,750</b>
<u>Dakota County, City of EAGAN -- ECOLAB, INC. --940 LONE OAK RD --ERCID -- 190250004</u>								
Phosphoric Acid	0	0	0	0	0	541	0	541
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>541</b>	<b>0</b>	<b>541</b>

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
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<u>Dakota County, City of EAGAN -- GOPHER RESOURCE CORP. --3385 S HWY 149 --ERCID -- 190250016</u>								
Arsenic	13,000	0	0	710,000	0	0	0	723,000
Lead	290,000	0	0	160,000,000	0	0	0	160,290,000
Antimony	22,000	0	0	3,100,000	0	0	0	3,122,000
Copper	53,000	0	0	280,000	0	0	0	333,000
<b>Totals</b>	<b>378,000</b>	<b>0</b>	<b>0</b>	<b>164,090,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>164,468,000</b>
<u>Dakota County, City of EAGAN -- HI-LEX BLEACH-H.L. ACQUISITION CO. --990 APOLLO RD BOX 64119 --ERCID -- 190250015</u>								
Methanol	312	0	0	0	0	0	654	966
<b>Totals</b>	<b>312</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>654</b>	<b>966</b>
<u>Dakota County, City of EAGAN -- MIDWEST COCA-COLA BOTTLING, INC. --2750 EAGANDALE BLVD --ERCID -- 190250013</u>								
Phosphoric Acid	0	0	0	0	0	0	4,522	4,522
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,522</b>	<b>4,522</b>
<u>Dakota County, City of EAGAN -- WATER HEATER INNOVATIONS, INC. --3107 SIBLEY MEMORIAL HWY --ERCID -- 190250027</u>								
Styrene	12,770	0	135	0	0	0	0	12,905
<b>Totals</b>	<b>12,770</b>	<b>0</b>	<b>135</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,905</b>
<u>Dakota County, City of FARMINGTON -- DUO PLASTICS, INC. --5119 W 212TH ST --ERCID -- 190400024</u>								
Di(2-ethylhexyl) Phthalate	98	0	0	15,700	0	0	0	15,798
<b>Totals</b>	<b>98</b>	<b>0</b>	<b>0</b>	<b>15,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,798</b>
<u>Dakota County, City of FARMINGTON -- MARIGOLD FOODS, INC. --15 4TH ST --ERCID -- 190400002</u>								
Nitric acid	0	0	0	0	0	20,914	0	20,914
Phosphoric acid	0	0	0	0	0	68,416	0	68,416
Nitrate compounds (water dissociable)	0	0	0	0	0	0	20,611	20,611
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89,330</b>	<b>20,611</b>	<b>109,941</b>
<u>Dakota County, City of HASTINGS -- CON AGRA FLOUR MILLING CO. --2005 VERMILLION ST --ERCID -- 190600001</u>								
Bromomethane	12,000	0	0	0	0	0	0	12,000
<b>Totals</b>	<b>12,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,000</b>
<u>Dakota County, City of LAKEVILLE -- CHEMCENTRAL/MINNESOTA --21675 HAMBURG AVE --ERCID -- 190800001</u>								
Methyl Ethyl Ketone	630	0	590	0	0	0	0	1,220
Ethylbenzene	340	0	140	0	0	0	0	480
Xylene (mixed isomers)	1,800	0	670	0	0	0	0	2,470
Toluene	370	0	1,800	0	0	0	0	2,170

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Emergency Response Commission  
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Glycol Ethers	15	0	560	0	0	0	0	575
Methanol	220	0	570	0	0	0	0	790
<b>Totals</b>	<b>3,375</b>	<b>0</b>	<b>4,330</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,705</b>
<u>Dakota County, City of LAKEVILLE -- CROWN CORK &amp; SEAL CO. --8415 220TH ST W --ERCID -- 190800011</u>								
Manganese Compounds	270	0	0	0	0	0	0	270
N-butyl Alcohol	170,000	0	0	0	0	0	0	170,000
Glycol Ethers	140,000	0	0	0	0	0	0	140,000
Hydrogen Fluoride	0	0	0	0	0	34,000	0	34,000
<b>Totals</b>	<b>310,270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,000</b>	<b>0</b>	<b>344,270</b>
<u>Dakota County, City of MENDOTA HEIGHTS -- APPLIED COATING TECHNOLOGY, INC. --2411 PILOT KNOB RD --ERCID -- 191050001</u>								
Methyl Ethyl Ketone	45,745	0	2,690	28,600	8,848	0	0	85,883
Xylene (mixed isomers)	46,494	0	3,885	28,600	1,896	0	0	80,875
<b>Totals</b>	<b>92,239</b>	<b>0</b>	<b>6,575</b>	<b>57,200</b>	<b>10,744</b>	<b>0</b>	<b>0</b>	<b>166,758</b>
<u>Dakota County, City of ROSEMOUNT -- D.P.C. INDUSTRIES, INC. --12800 PINE BEND TRAIL --ERCID -- 191450018</u>								
Chlorine	221	0	0	0	0	0	0	221
<b>Totals</b>	<b>221</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>221</b>
<u>Dakota County, City of ROSEMOUNT -- KOCH PETROLEUM GROUP --12555 CLAYTON BLVD --ERCID -- 191450005</u>								
Toluene	80,000	0	0	47,000	0	76,000	50	203,050
Cobalt Compounds	20	0	0	200	13,000	0	0	13,220
Cyclohexane	4,400	0	0	3,600	0	33,000	0	41,000
Zinc Compounds	2,200	0	0	0	51,000	0	0	53,200
Chlorine	1,000	0	0	0	0	0	0	1,000
Tetrachloroethylene	4,300	0	0	0	0	0	0	4,300
Ethylbenzene	13,000	0	0	3,700	0	3,800	15	20,515
Ethylene	980	0	0	0	0	150,000	0	150,980
Ethylene Glycol	23,000	0	0	0	0	0	0	23,000
Manganese Compounds	680	0	0	31,000	0	0	0	31,680
Methanol	49,000	0	0	0	0	0	0	49,000
Naphthalene	8,600	0	0	3,700	0	170	0	12,470
Phenol	1,900	0	0	950	0	120,000	0	122,850



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Nickel	90	0	0	0	0	0	0	90
Copper	2,370	0	0	0	0	0	0	2,370
Chlorine	22	0	0	0	0	0	0	22
<b>Totals</b>	<b>60,311</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63,496</b>	<b>0</b>	<b>123,807</b>
<u>Dakota County, City of ROSEMOUNT -- U OF MN - ROSEMOUNT RESEARCH CENTER --15325 BABCOCK AVE --ERCID -- 191450017</u>								
Ammonia	170,748	0	0	0	0	0	0	170,748
<b>Totals</b>	<b>170,748</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>170,748</b>
<u>DAKOTA County, City of ROSEMOUNT -- WASTEQUIP/RAYFO --15629 CLAYTON AVE E --ERCID -- 191450051</u>								
Xylene (mixed isomers)	19,138	0	0	0	0	0	0	19,138
<b>Totals</b>	<b>19,138</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,138</b>
<u>Dakota County, City of SOUTH ST. PAUL -- TWIN CITY TANNING COMPANY, LLP --501 MALDEN ST --ERCID -- 191550005</u>								
Manganese Compounds	67,383	0	0	0	0	0	0	67,383
Chromium Compounds	11,293	0	0	69,913	0	0	0	81,206
Ammonia	3,510	0	0	0	0	0	105,305	108,815
<b>Totals</b>	<b>82,186</b>	<b>0</b>	<b>0</b>	<b>69,913</b>	<b>0</b>	<b>0</b>	<b>105,305</b>	<b>257,404</b>
<u>Dakota County, City of SOUTH ST. PAUL -- VAN HOVEN CO., INC. --505 HARDMAN AVE BOX 56 --ERCID -- 191550003</u>								
Ammonia	0	0	0	0	0	0	10,022	10,022
Chlorine	612	0	0	0	0	0	0	612
<b>Totals</b>	<b>612</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,022</b>	<b>10,634</b>
<u>Dakota County, City of SOUTH ST. PAUL -- WATEROUS CO. --125 HARDMAN AVE. S. --ERCID -- 191550013</u>								
Xylene (mixed isomers)	45,800	0	0	12,000	2,000	0	0	59,800
<b>Totals</b>	<b>45,800</b>	<b>0</b>	<b>0</b>	<b>12,000</b>	<b>2,000</b>	<b>0</b>	<b>0</b>	<b>59,800</b>
<u>Dodge County, City of DODGE CENTER -- MCNEILUS TRUCK &amp; MFG., INC. --HWY 14 E BOX 70 --ERCID -- 200300001</u>								
Manganese	310	0	0	0	150,000	0	0	150,310
Nickel	1	0	0	0	31,000	0	0	31,001
Zinc Compounds	65,000	0	0	0	0	0	0	65,000
Methyl Isobutyl Ketone	15,000	0	3,600	0	0	0	0	18,600
Xylene (mixed isomers)	12,000	0	2,900	0	0	0	0	14,900
Methyl Ethyl Ketone	31,000	0	68,000	0	0	0	0	99,000
N-butyl Alcohol	31,000	0	7,200	0	0	0	0	38,200
<b>Totals</b>	<b>154,311</b>	<b>0</b>	<b>81,700</b>	<b>0</b>	<b>181,000</b>	<b>0</b>	<b>0</b>	<b>417,011</b>

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Department of Public Safety  
Emergency Response Commission  
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<u>Douglas County, City of ALEXANDRIA -- 3M - ABRASIVES SYS. DIV. --2115 S BROADWAY --ERCID -- 210050001</u>								
Methyl Ethyl Ketone	11,000	0	0	0	0	0	4,800	15,800
Phenol	38,000	0	0	0	0	0	1,200	39,200
2-ethoxyethanol	13,000	0	0	0	0	0	700	13,700
Formaldehyde	20,000	0	0	0	0	0	1,200	21,200
<b>Totals</b>	<b>82,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,900</b>	<b>89,900</b>
<u>Douglas County, City of ALEXANDRIA -- DOUGLAS MACHINE --3404 IOWA ST --ERCID -- 210050019</u>								
Nitric Acid	33	0	0	0	0	20,781	0	20,814
Zinc Compounds	228	0	0	0	5,404	0	0	5,632
<b>Totals</b>	<b>261</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,404</b>	<b>20,781</b>	<b>0</b>	<b>26,446</b>
<u>Faribault County, City of ELMORE -- ELMORE TRUCK ACCESSORIES, INC. --107 E WILLIS --ERCID -- 220390003</u>								
Styrene	12,400	0	0	0	0	0	0	12,400
<b>Totals</b>	<b>12,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,400</b>
<u>Faribault County, City of WINNEBAGO -- CORN PLUS --711 6TH AVE SE --ERCID -- 221100019</u>								
Ammonia	950	0	0	0	0	0	0	950
<b>Totals</b>	<b>950</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>950</b>
<u>Faribault County, City of WINNEBAGO -- CROWN TONKA WALK-INS --304 MAIN ST N --ERCID -- 221100014</u>								
Dichlorodifluoromethane	5	0	0	0	0	0	0	5
Trichlorofluoromethane	5	0	0	0	0	0	0	5
Diisocyanates	5	0	0	0	0	0	0	5
<b>Totals</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>
<u>Fillmore County, City of CHATFIELD -- STRONGWELL - CHATFIELD DIVISION --1610 HWY 52 S --ERCID -- 230500002</u>								
Antimony Compounds	350	0	0	0	0	0	0	350
Decabromodiphenyl Oxide	870	0	870	0	0	0	0	1,740
N-methyl-2-pyrrolidone	9,300	0	4,000	0	11,000	0	120	24,420
Methyl Ethyl Ketone	11,000	0	370	0	2,600	0	0	13,970
Styrene	41,000	0	1,200	0	0	0	0	42,200
<b>Totals</b>	<b>62,520</b>	<b>0</b>	<b>6,440</b>	<b>0</b>	<b>13,600</b>	<b>0</b>	<b>120</b>	<b>82,680</b>
<u>Freeborn County, City of ALBERT LEA -- ALBERT LEA ELECTROPLATING, INC. --808 12TH ST BOX 89 --ERCID -- 240050006</u>								
Zinc Compounds	400	0	0	0	10,000	0	0	10,400
<b>Totals</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>10,400</b>

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 Department of Public Safety  
 Emergency Response Commission  
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<u>Freeborn County, City of ALBERT LEA -- FARMLAND FOODS INC --1000 E MAIN ST --ERCID -- 240050050</u>								
Ammonia	16,240	0	0	0	0	0	0	16,240
<b>Totals</b>	<b>16,240</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,240</b>
<u>Freeborn County, City of ALBERT LEA -- PROGRESS CASTING GROUP - ALBERT LEA --1521 E HAWTHORNE --ERCID -- 240050044</u>								
Aluminum (fume or dust)	0	0	0	0	56,906	0	0	56,906
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,906</b>	<b>0</b>	<b>0</b>	<b>56,906</b>
<u>Freeborn County, City of ALBERT LEA -- STREATER, INC. --411 S 1ST AVE --ERCID -- 240050002</u>								
Methyl Isobutyl Ketone	14,940	0	1,258	4,228	0	0	0	20,426
Methyl Ethyl Ketone	37,699	0	16,427	29,597	0	0	0	83,723
Phosphoric Acid	1,204	0	0	0	0	18,855	0	20,059
Toluene	19,765	0	22,244	21,140	0	0	0	63,149
Xylene (mixed isomers)	6,218	0	14,619	4,228	0	0	0	25,065
1,2,4-trimethylbenzene	11,846	0	0	0	0	0	0	11,846
<b>Totals</b>	<b>91,672</b>	<b>0</b>	<b>54,548</b>	<b>59,193</b>	<b>0</b>	<b>18,855</b>	<b>0</b>	<b>224,268</b>
<u>Goodhue County, City of CANNON FALLS -- CANNON EQUIPMENT COMPANY --324 W WASHINGTON ST. --ERCID -- 250250002</u>								
Nickel Compounds	2,624	0	0	0	0	0	0	2,624
Zinc Compounds	19,945	0	0	0	0	0	0	19,945
<b>Totals</b>	<b>22,569</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22,569</b>
<u>Goodhue County, City of CANNON FALLS -- THE BERGQUIST COMPANY --301 WASHINGTON ST --ERCID -- 250250008</u>								
Toluene	584	23,700	1,894	0	0	0	5	26,183
Xylene (mixed isomers)	13,098	450,326	92,698	0	0	0	5	556,127
<b>Totals</b>	<b>13,682</b>	<b>474,026</b>	<b>94,592</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>582,310</b>
<u>Goodhue County, City of KENYON -- FOLDCRAFT COMPANY --615 CENTENNIAL DRIVE --ERCID -- 250790015</u>								
Styrene	7,721	0	0	0	0	0	0	7,721
Dichloromethane	12,656	0	0	0	0	0	737	13,393
<b>Totals</b>	<b>20,377</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>737</b>	<b>21,114</b>
<u>Goodhue County, City of PINE ISLAND -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. --206 2ND ST NE BOX 738 --ERCID -- 250990001</u>								
Nitrate compounds (water dissociable)	0	0	0	0	0	0	533	533
Phosphoric acid	0	0	0	0	0	8,921	0	8,921
Chlorine	0	0	0	0	0	10,085	0	10,085
Nitric acid	0	0	0	0	0	31,639	0	31,639

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 Department of Public Safety  
 Emergency Response Commission  
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<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,645</b>	<b>533</b>	<b>51,178</b>
<u>Goodhue County, City of RED WING -- ARCHER DANIELS MIDLAND CO. --118 MAIN ST PO BOX 74 --ERCID -- 251100005</u>								
N-hexane	325,226	0	0	0	0	0	428	325,654
<b>Totals</b>	<b>325,226</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>428</b>	<b>325,654</b>
<u>Goodhue County, City of RED WING -- DAYCO PTI INC. --4079 PEPIN AVE --ERCID -- 251100010</u>								
Formaldehyde	0	0	0	0	0	0	0	0
Toluene	2,634	0	0	0	0	0	0	2,634
Dichloromethane	5,760	0	0	0	0	0	0	5,760
<b>Totals</b>	<b>8,394</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,394</b>
<u>Goodhue County, City of RED WING -- RED WING SHOES CO. - PLANT 1 --129 MAIN ST --ERCID -- 251100008</u>								
Toluene	14,041	0	1,723	0	0	0	0	15,764
<b>Totals</b>	<b>14,041</b>	<b>0</b>	<b>1,723</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,764</b>
<u>Goodhue County, City of RED WING -- RED WING SHOES CO. - PLANT II --135 CANNON RIVER AVE --ERCID -- 251100001</u>								
Toluene	11,421	0	1,084	0	0	0	0	12,505
<b>Totals</b>	<b>11,421</b>	<b>0</b>	<b>1,084</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,505</b>
<u>Goodhue County, City of RED WING -- S.B. FOOT TANNING --805 BENCH ST --ERCID -- 251100002</u>								
Glycol Ethers	77,992	0	0	0	0	0	14,588	92,580
Chromium Compounds	72,944	0	0	0	0	0	0	72,944
Formic Acid	9,092	0	0	0	0	0	2	9,094
<b>Totals</b>	<b>160,028</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14,590</b>	<b>174,618</b>
<u>Goodhue County, City of RED WING -- USG INTERIORS, INC. --27384 HWY 61 BLVD --ERCID -- 251100009</u>								
Carbonyl Sulfide	282,820	0	0	0	0	0	0	282,820
<b>Totals</b>	<b>282,820</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>282,820</b>
<u>Goodhue County, City of ZUMBROTA -- DAIRY FARMERS OF AMERICA --1313 NORTH STAR DRV --ERCID -- 251600002</u>								
Phosphoric Acid	0	0	0	12,710	0	16,954	0	29,664
Nitric Acid	0	0	0	58,820	0	78,431	0	137,251
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>71,530</b>	<b>0</b>	<b>95,385</b>	<b>0</b>	<b>166,915</b>
<u>Grant County, City of BARRETT -- TWF INDUSTRIES --HWY 55 --ERCID -- 260100004</u>								
Methyl Ethyl Ketone	14,209	0	46	0	873	0	0	15,128
<b>Totals</b>	<b>14,209</b>	<b>0</b>	<b>46</b>	<b>0</b>	<b>873</b>	<b>0</b>	<b>0</b>	<b>15,128</b>

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 Emergency Response Commission  
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<u>Hennepin County, City of BLOOMINGTON -- CENTURY MANUFACTURING CO. --9231 PENN AVE S --ERCID -- 270050112</u>								
Copper	0	0	0	0	7,700	0	0	7,700
Xylene (mixed isomers)	43,000	0	140	0	0	0	0	43,140
<b>Totals</b>	<b>43,000</b>	<b>0</b>	<b>140</b>	<b>0</b>	<b>7,700</b>	<b>0</b>	<b>0</b>	<b>50,840</b>
<u>Hennepin County, City of BLOOMINGTON -- CHEMREX INC. --333 W 86TH ST --ERCID -- 270050008</u>								
1,2,4-trimethylbenzene	5,938	0	0	2,400	0	0	1,862	10,200
<b>Totals</b>	<b>5,938</b>	<b>0</b>	<b>0</b>	<b>2,400</b>	<b>0</b>	<b>0</b>	<b>1,862</b>	<b>10,200</b>
<u>Hennepin County, City of BLOOMINGTON -- CYPRESS SEMICONDUCTOR --2401 E 86TH ST --ERCID -- 270050010</u>								
Hydrogen Fluoride	38	0	0	0	0	26,822	0	26,860
Phosphoric Acid	6	0	0	0	0	61,828	0	61,834
<b>Totals</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>88,650</b>	<b>0</b>	<b>88,694</b>
<u>Hennepin County, City of BLOOMINGTON -- FLAME METALS, PLANT #3 --1900 W 98TH ST --ERCID -- 270050080</u>								
Tetrachloroethylene	38,800	0	0	0	300	0	0	39,100
<b>Totals</b>	<b>38,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>39,100</b>
<u>Hennepin County, City of BLOOMINGTON -- PRINTED CIRCUITS, INC. --1200 W 96TH ST --ERCID -- 270050007</u>								
Copper Compounds	33	0	0	0	3,600	0	0	3,633
<b>Totals</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,600</b>	<b>0</b>	<b>0</b>	<b>3,633</b>
<u>Hennepin County, City of BLOOMINGTON -- SEAGATE TECHNOLOGY, INC. --7801 COMPUTER AVE S --ERCID -- 270050005</u>								
N-methyl-2-pyrrolidone	0	0	0	0	512,312	0	21,410	533,722
Ethylene Glycol	0	0	30,463	0	0	0	2,676	33,139
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>30,463</b>	<b>0</b>	<b>512,312</b>	<b>0</b>	<b>24,086</b>	<b>566,861</b>
<u>Hennepin County, City of BLOOMINGTON -- THERMO KING CORP. --314 W 90TH ST --ERCID -- 270050009</u>								
Copper	3	0	0	0	50,000	0	0	50,003
<b>Totals</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>50,003</b>
<u>Hennepin County, City of BLOOMINGTON -- VTC, INC. --2800 E OLD SHAKOPEE RD --ERCID -- 270050011</u>								
Hydrogen Fluoride	732	0	0	0	0	13,775	139	14,646
Phosphoric Acid	723	0	0	0	0	13,593	137	14,453
N-methyl-2-pyrrolidone	7,707	0	24,143	0	9,642	0	1,877	43,369
<b>Totals</b>	<b>9,162</b>	<b>0</b>	<b>24,143</b>	<b>0</b>	<b>9,642</b>	<b>27,368</b>	<b>2,153</b>	<b>72,468</b>
<u>Hennepin County, City of BROOKLYN CENTER -- VISION EASE LENS, POLYCARBONATE OPER. --6800 SHINGLE CREEK PKWY --ERCID --</u>								
Methyl Ethyl Ketone	26,208	0	2,995	0	0	0	0	29,203

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1,3-dichloro-1,1,2,2,3-pentafluoropropane	13,145	0	0	0	0	0	0	13,145
3,3-dichloro-1,1,1,2,2-pentafluoropropane	10,641	0	0	0	0	0	0	10,641
<b>Totals</b>	<b>49,994</b>	<b>0</b>	<b>2,995</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,989</b>
<u>Hennepin County, City of BROOKLYN PARK -- PEARL MANUFACTURING, INC. --9224 73RD AVE N --ERCID -- 270150003</u>								
Styrene	149,531	0	0	0	0	0	0	149,531
<b>Totals</b>	<b>149,531</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149,531</b>
<u>Hennepin County, City of BROOKLYN PARK -- TECHNICAL PLATING, INC. --8760 XYLON AVE N --ERCID -- 270150036</u>								
Trichloroethylene	9,656	0	0	0	6,589	0	0	16,245
<b>Totals</b>	<b>9,656</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,589</b>	<b>0</b>	<b>0</b>	<b>16,245</b>
<u>Hennepin County, City of BROOKLYN PARK -- THOMAS ENGINEERING CO. --7024 NORTHLAND DRV --ERCID -- 270150033</u>								
Nickel	1	0	0	0	25,647	0	0	25,648
Trichloroethylene	12,405	0	0	24,810	376	0	0	37,591
Chromium	9	0	0	0	91,391	0	0	91,400
Copper	13	0	0	0	588,314	0	0	588,327
<b>Totals</b>	<b>12,428</b>	<b>0</b>	<b>0</b>	<b>24,810</b>	<b>705,728</b>	<b>0</b>	<b>0</b>	<b>742,966</b>
<u>Hennepin County, City of EDEN PRAIRIE -- APPLIED COATING TECHNOLOGY, INC. --12150 TECHNOLOGY DRV --ERCID -- 270560004</u>								
Nitric Acid	70	0	0	0	0	60,390	0	60,460
<b>Totals</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,390</b>	<b>0</b>	<b>60,460</b>
<u>Hennepin County, City of EDEN PRAIRIE -- DOUGLAS CORPORATION --9650 VALLEYVIEW ROAD --ERCID -- 270560076</u>								
Methyl Isobutyl Ketone	12,400	0	0	0	0	0	0	12,400
Glycol Ethers	11,000	0	0	0	0	0	0	11,000
Methyl Ethyl Ketone	80,400	0	0	0	290,800	0	0	371,200
Toluene	60,100	0	0	0	0	0	0	60,100
<b>Totals</b>	<b>163,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>290,800</b>	<b>0</b>	<b>0</b>	<b>454,700</b>
<u>Hennepin County, City of EDEN PRAIRIE -- EATON CORP. - HYDRAULICS DIV. --15151 HWY 5 --ERCID -- 270560020</u>								
Nickel	303	0	0	0	31,161	0	0	31,464
Manganese	111	0	0	0	23,794	0	0	23,905
<b>Totals</b>	<b>414</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54,955</b>	<b>0</b>	<b>0</b>	<b>55,369</b>
<u>Hennepin County, City of EDEN PRAIRIE -- GUSTAFSON, INC. --7490 GOLDEN TRIANGLE DRIVE --ERCID -- 270560069</u>								
Chromium	10	0	0	0	5,881	0	0	5,891
<b>Totals</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,881</b>	<b>0</b>	<b>0</b>	<b>5,891</b>

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<u>Hennepin County, City of EDINA -- FILMTEC CORP. --7200 OHMS LANE --ERCID -- 270600002</u>								
1,3-Phenylenediamine	0	0	0	0	0	0	18,000	18,000
Methanol	728	0	0	0	0	0	17,489	18,217
N,n-dimethylformamide	9,760	0	0	0	0	0	1,279,722	1,289,482
Phosphoric Acid	0	0	0	0	0	0	15,269	15,269
<b>Totals</b>	<b>10,488</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,330,480</b>	<b>1,340,968</b>
<u>Hennepin County, City of GOLDEN VALLEY -- HONEYWELL --1985 DOUGLAS DRV N --ERCID -- 270700001</u>								
Copper	390	0	0	8,750	372,934	0	0	382,074
Chromium	435	0	0	375	13,687	0	0	14,497
Nickel	281	0	0	1,250	6,769	0	0	8,300
Lead	251	0	0	0	9,970	0	0	10,221
Methanol	2,474	0	4,776	0	0	0	0	7,250
Toluene	3,844	0	281	0	3,975	0	0	8,100
Trichloroethylene	20,039	0	0	0	5,820	0	253	26,112
<b>Totals</b>	<b>27,714</b>	<b>0</b>	<b>5,057</b>	<b>10,375</b>	<b>413,155</b>	<b>0</b>	<b>253</b>	<b>456,554</b>
<u>Hennepin County, City of GOLDEN VALLEY -- TENNANT CO. --701 N LILAC DRV --ERCID -- 270700010</u>								
Xylene (mixed isomers)	39,636	0	758	90	0	0	0	40,484
<b>Totals</b>	<b>39,636</b>	<b>0</b>	<b>758</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40,484</b>
<u>Hennepin County, City of HAMEL -- QX, INC. --2705 W HWY 55 --ERCID -- 270870008</u>								
Copper	6,897	0	0	0	207	0	0	7,104
<b>Totals</b>	<b>6,897</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>0</b>	<b>0</b>	<b>7,104</b>
<u>Hennepin County, City of HOPKINS -- ALLIEDSIGNAL, INC. --560 16TH AVE S --ERCID -- 270950001</u>								
Nitric Acid	250	0	0	0	0	60	136,806	137,116
Nickel Compounds	509	0	0	0	12,723	0	0	13,232
Copper	900	0	0	0	34,609	0	0	35,509
<b>Totals</b>	<b>1,659</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47,332</b>	<b>60</b>	<b>136,806</b>	<b>185,857</b>
<u>Hennepin County, City of HOPKINS -- KANGAS ENAMELING --609 12TH AVE S --ERCID -- 270950044</u>								
Xylene (mixed isomers)	13,000	0	0	0	520	0	0	13,520
<b>Totals</b>	<b>13,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>520</b>	<b>0</b>	<b>0</b>	<b>13,520</b>
<u>Hennepin County, City of MAPLE GROVE -- HANSON SPANCRETE MIDWEST INC --10655 CO RD 81 --ERCID -- 271150036</u>								
Hydrochloric Acid (aerosol forms only)	0	0	0	82,399	0	86,119	0	168,518

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<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82,399</b>	<b>0</b>	<b>86,119</b>	<b>0</b>	<b>168,518</b>
<u>Hennepin County, City of MAPLE GROVE -- UNIVERSAL CIRCUITS, INC. --8860 ZACHARY LANE --ERCID -- 271150026</u>								
Copper	250	0	0	0	40,477	0	0	40,727
<b>Totals</b>	<b>250</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40,477</b>	<b>0</b>	<b>0</b>	<b>40,727</b>
<u>Hennepin County, City of MAPLE GROVE -- UNIVERSAL PLASTICS, INC. --10751 89TH AVE N --ERCID -- 271150028</u>								
Styrene	3,087	0	0	0	0	0	0	3,087
<b>Totals</b>	<b>3,087</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,087</b>
<u>Hennepin County, City of MAPLE GROVE -- ZENITH PRODUCTS CO. --9177 ZACHARY LANE --ERCID -- 271150035</u>								
Toluene	21,687	0	279	0	3,510	0	0	25,476
<b>Totals</b>	<b>21,687</b>	<b>0</b>	<b>279</b>	<b>0</b>	<b>3,510</b>	<b>0</b>	<b>0</b>	<b>25,476</b>
<u>Hennepin County, City of MAPLE PLAIN -- ELECTROCHEMICALS, INC. --5630 PIONEER CREEK DR --ERCID -- 271200010</u>								
Nitric Acid	1	0	0	0	0	202	584	787
Copper Compounds	68	0	0	0	859	0	0	927
Phosphoric Acid	0	0	0	0	0	186	1,050	1,236
N-methyl-2-pyrrolidone	3	0	1,839	0	81	0	204	2,127
<b>Totals</b>	<b>72</b>	<b>0</b>	<b>1,839</b>	<b>0</b>	<b>940</b>	<b>388</b>	<b>1,838</b>	<b>5,077</b>
<u>Hennepin County, City of MINNEAPOLIS -- APPLIED COATING TECHNOLOGY, INC. --3225 COLUMBIA AVE NE --ERCID -- 271350104</u>								
Methyl Ethyl Ketone	28,651	0	0	0	6,504	0	542	35,697
Xylene (mixed isomers)	28,094	0	0	0	7,005	0	2,438	37,537
<b>Totals</b>	<b>56,745</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,509</b>	<b>0</b>	<b>2,980</b>	<b>73,234</b>
<u>Hennepin County, City of MINNEAPOLIS -- AVECOR CARDIOVASCULAR, INC. --7611 NORTHLAND DR --ERCID -- 271350545</u>								
Toluene	22,000	0	130	2,200	0	0	0	24,330
<b>Totals</b>	<b>22,000</b>	<b>0</b>	<b>130</b>	<b>2,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24,330</b>
<u>Hennepin County, City of MINNEAPOLIS -- BOKER'S, INC. --3104 SNELLING AVE S --ERCID -- 271350429</u>								
Copper	65	0	0	0	63,425	0	0	63,490
Chromium	32	0	0	0	29,015	0	0	29,047
<b>Totals</b>	<b>97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>92,440</b>	<b>0</b>	<b>0</b>	<b>92,537</b>
<u>Hennepin County, City of MINNEAPOLIS -- DANA CORP.-GRESEN HYDR. DIV. --600 HOOVER ST --ERCID -- 271350540</u>								
Nickel	0	0	0	0	10,300	0	0	10,300
Chromium	0	0	0	0	6,300	0	0	6,300
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,600</b>	<b>0</b>	<b>0</b>	<b>16,600</b>

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
 Managed for the Calendar Year 1998

State of Minnesota  
 Department of Public Safety  
 Emergency Response Commission  
 (Amount in Pounds)

Sorted by County, City, Facility

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<u>Hennepin County, City of MINNEAPOLIS -- DAVIS-FROST, INC. --1209 NE TYLER ST --ERCID -- 271350098</u>								
Ethylbenzene	707	0	6,658	4,098	0	0	0	11,463
Dicyclopentadiene	1,441	0	0	0	0	0	0	1,441
Toluene	1,175	0	27,741	0	0	0	0	28,916
1,2,4-trimethylbenzene	321	0	0	0	0	0	0	321
Xylene (mixed isomers)	3,386	0	30,330	18,669	0	0	0	52,385
Methyl Isobutyl Ketone	722	0	5,548	0	0	0	0	6,270
Glycol Ethers	1,579	0	0	0	0	0	0	1,579
<b>Totals</b>	<b>9,331</b>	<b>0</b>	<b>70,277</b>	<b>22,767</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102,375</b>
<u>Hennepin County, City of MINNEAPOLIS -- DIAMOND VOGEL-NORTH, INC. --2020 N 2ND ST --ERCID -- 271350079</u>								
Xylene (mixed isomers)	11,812	0	91,668	0	0	0	0	103,480
Methyl Isobutyl Ketone	610	0	0	0	0	0	0	610
Methyl Ethyl Ketone	684	0	19,103	0	0	0	0	19,787
Toluene	1,356	0	17,891	0	0	0	0	19,247
Toluenediisocyanate (mixed isomers)	4,282	0	0	0	0	0	0	4,282
<b>Totals</b>	<b>18,744</b>	<b>0</b>	<b>128,662</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147,406</b>
<u>Hennepin County, City of MINNEAPOLIS -- DOUGLAS CORP. --620 12TH AVE S --ERCID -- 271350570</u>								
Toluene	12,500	0	0	0	0	0	0	12,500
Methyl Ethyl Ketone	31,900	0	0	0	62,500	0	0	94,400
<b>Totals</b>	<b>44,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>62,500</b>	<b>0</b>	<b>0</b>	<b>106,900</b>
<u>Hennepin County, City of MINNEAPOLIS -- ELECTRIC MACHINERY --800 CENTRAL AVE NE --ERCID -- 271350109</u>								
Xylene (mixed isomers)	11,560	0	900	0	0	0	0	12,460
Copper	10	0	0	0	15,000	0	0	15,010
<b>Totals</b>	<b>11,570</b>	<b>0</b>	<b>900</b>	<b>0</b>	<b>15,000</b>	<b>0</b>	<b>0</b>	<b>27,470</b>
<u>Hennepin County, City of MINNEAPOLIS -- GLOBE TOOL &amp; MFG. CO. --730 24TH AVE SE --ERCID -- 271350187</u>								
Trichloroethylene	14,724	0	0	0	1,380	0	0	16,104
<b>Totals</b>	<b>14,724</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,380</b>	<b>0</b>	<b>0</b>	<b>16,104</b>
<u>Hennepin County, City of MINNEAPOLIS -- GRACO, INC. --60 11TH AVE NE BOX 1441 --ERCID -- 271350027</u>								
Chromium	15	0	0	0	62,000	0	0	62,015
Manganese	1	0	0	0	28,000	0	0	28,001
Copper	41	0	0	0	71,000	0	0	71,041

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

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Nickel	4	0	0	0	39,000	0	0	39,004
Xylene (mixed isomers)	5,200	0	0	0	21,000	0	0	26,200
<b>Totals</b>	<b>5,261</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>221,000</b>	<b>0</b>	<b>0</b>	<b>226,261</b>
<u>Hennepin County, City of MINNEAPOLIS -- HARD CHROME, INC. --2631 2ND ST NE --ERCID -- 271350029</u>								
Chromium Compounds	72	0	0	0	110	238	0	420
Zinc Compounds	185	0	0	0	433	698	0	1,316
Cyanide Compounds	0	0	0	0	0	16,700	1,000	17,700
Nitric Acid	337	0	0	0	0	13,910	2,583	16,830
<b>Totals</b>	<b>594</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>543</b>	<b>31,546</b>	<b>3,583</b>	<b>36,266</b>
<u>Hennepin County, City of MINNEAPOLIS -- HAUENSTEIN &amp; BURMEISTER, INC. --2629 30TH AVE S --ERCID -- 271350281</u>								
Xylene (mixed isomers)	9,045	0	0	499	1,960	0	0	11,504
<b>Totals</b>	<b>9,045</b>	<b>0</b>	<b>0</b>	<b>499</b>	<b>1,960</b>	<b>0</b>	<b>0</b>	<b>11,504</b>
<u>Hennepin County, City of MINNEAPOLIS -- HAWKINS CHEMICAL, INC. --3100 E HENNEPIN AVE --ERCID -- 271350030</u>								
Ammonia	28	0	0	0	0	17	0	45
Nitric Acid	21	0	0	0	0	4,666	0	4,687
Phosphoric Acid	64	0	0	0	0	7,790	0	7,854
<b>Totals</b>	<b>113</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,473</b>	<b>0</b>	<b>12,586</b>
<u>Hennepin County, City of MINNEAPOLIS -- HONEYWELL - MILITARY AVIONICS DIV. --2600 RIDGWAY PKWY --ERCID -- 271350033</u>								
Trichloroethylene	6,471	0	0	0	5,949	0	0	12,420
<b>Totals</b>	<b>6,471</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,949</b>	<b>0</b>	<b>0</b>	<b>12,420</b>
<u>Hennepin County, City of MINNEAPOLIS -- ILLBRUCK, INC. --3800 WASHINGTON AVE N --ERCID -- 271350288</u>								
Toluene	14,592	0	4,864	0	0	0	0	19,456
<b>Totals</b>	<b>14,592</b>	<b>0</b>	<b>4,864</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,456</b>
<u>Hennepin County, City of MINNEAPOLIS -- INTERPLASTIC CORP. --2015 NE BROADWAY ST. --ERCID -- 271350108</u>								
Maleic Anhydride	223	0	4,720	0	0	16,480	0	21,423
Ethylene Glycol	80	0	0	0	0	2,354	0	2,434
Dicyclopentadiene	116	0	0	0	0	9,497	0	9,613
Methyl Methacrylate	43	0	0	0	0	634	0	677
Styrene	22,927	0	64,036	0	0	268,159	0	355,122
Phthalic Anhydride	216	0	0	0	0	6,277	0	6,493
<b>Totals</b>	<b>23,605</b>	<b>0</b>	<b>68,756</b>	<b>0</b>	<b>0</b>	<b>303,401</b>	<b>0</b>	<b>395,762</b>

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
 Managed for the Calendar Year 1998

State of Minnesota  
 Department of Public Safety  
 Emergency Response Commission  
 (Amount in Pounds)

Sorted by County, City, Facility

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<u>Hennepin County, City of MINNEAPOLIS -- KAPAK CORPORATION --5305 PARKDALE DR --ERCID -- 271350499</u>								
Methyl Ethyl Ketone	111	0	102	0	0	13,400	0	13,613
<b>Totals</b>	<b>111</b>	<b>0</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>13,400</b>	<b>0</b>	<b>13,613</b>
<u>Hennepin County, City of MINNEAPOLIS -- LE JEUNE STEEL CO. --118 W 60TH ST --ERCID -- 271350226</u>								
Manganese	27	0	0	0	8,185	0	0	8,212
<b>Totals</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,185</b>	<b>0</b>	<b>0</b>	<b>8,212</b>
<u>Hennepin County, City of MINNEAPOLIS -- MARIGOLD FOODS, INC. MINNEAPOLIS PLANT --420 W BROADWAY --ERCID -- 271350040</u>								
Nitric Acid	0	0	0	0	0	12,599	0	12,599
Phosphoric Acid	0	0	0	0	0	11,234	0	11,234
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,833</b>	<b>0</b>	<b>23,833</b>
<u>Hennepin County, City of MINNEAPOLIS -- MENTOR MINNESOTA OPERATIONS --1615 W RIVER RD N --ERCID -- 271350516</u>								
Toluene	9,154	0	2,316	0	0	0	0	11,470
<b>Totals</b>	<b>9,154</b>	<b>0</b>	<b>2,316</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,470</b>
<u>Hennepin County, City of MINNEAPOLIS -- METALLURGICAL, INC. --900 E HENNEPIN AVE --ERCID -- 271350107</u>								
Ammonia	36,100	0	0	0	0	0	0	36,100
<b>Totals</b>	<b>36,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,100</b>
<u>Hennepin County, City of MINNEAPOLIS -- NICO PRODUCTS, INC. --2929 1ST AVE S --ERCID -- 271350052</u>								
Zinc Compounds	565	0	0	0	45,476	0	0	46,041
Nickel Compounds	209	0	0	0	2,254	0	0	2,463
Cyanide Compounds	100	0	0	0	0	0	5,281	5,381
Trichloroethylene	37,850	0	0	0	4,316	0	1	42,167
Nitric Acid	200	0	0	0	0	3,000	2,336	5,536
<b>Totals</b>	<b>38,924</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,046</b>	<b>3,000</b>	<b>7,618</b>	<b>101,588</b>
<u>Hennepin County, City of MINNEAPOLIS -- NSP - RIVERSIDE PLANT --3100 MARSHALL ST NE --ERCID -- 271350064</u>								
Hydrochloric Acid (aerosol forms only)	10,000	0	0	0	0	40,000	0	50,000
Nickel Compounds	16,000	0	0	0	0	0	0	16,000
Barium Compounds	300,000	0	0	0	0	0	0	300,000
Sulfuric Acid (aerosol forms only)	23,000	0	0	0	0	14,000	0	37,000
Hydrogen Fluoride	27,000	0	0	0	0	27,000	0	54,000
<b>Totals</b>	<b>376,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>81,000</b>	<b>0</b>	<b>457,000</b>

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Department of Public Safety  
Emergency Response Commission  
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<u>Hennepin County, City of MINNEAPOLIS -- PECHINEY PLASTIC PACKAGING, INC --150 26TH AVE SE --ERCID -- 271350003</u>								
Methyl Ethyl Ketone	110,000	0	22,000	0	0	0	0	132,000
Toluene	110,000	0	6,000	0	0	0	0	116,000
<b>Totals</b>	<b>220,000</b>	<b>0</b>	<b>28,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>248,000</b>
<u>Hennepin County, City of MINNEAPOLIS -- PERMATITE MANUFACTURING --112 15TH AVE NE --ERCID -- 271350517</u>								
Toluene	1,145	0	440	0	0	0	0	1,585
<b>Totals</b>	<b>1,145</b>	<b>0</b>	<b>440</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,585</b>
<u>Hennepin County, City of MINNEAPOLIS -- PIONEER METAL FINISHING --1717 W RIVER RD N --ERCID -- 271350092</u>								
Phosphoric Acid	4,133	0	0	0	99,225	47,066	0	150,424
Nitric Acid	5,004	0	0	0	0	492,500	1,650	499,154
Nitrate Compounds	0	0	0	0	0	0	494,150	494,150
<b>Totals</b>	<b>9,137</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99,225</b>	<b>539,566</b>	<b>495,800</b>	<b>1,143,728</b>
<u>Hennepin County, City of MINNEAPOLIS -- RITRAMA DURAMARK --800 KASOTA AVE --ERCID -- 271350224</u>								
N-hexane	28,543	0	0	0	0	0	0	28,543
Toluene	100,700	0	24,101	0	0	0	0	124,801
<b>Totals</b>	<b>129,243</b>	<b>0</b>	<b>24,101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>153,344</b>
<u>Hennepin County, City of MINNEAPOLIS -- SUPERIOR PLATING, INC. --315 1ST AVE NE --ERCID -- 271350069</u>								
Nitric Acid	1,633	0	0	0	0	54,538	0	56,171
Chromium Compounds	300	0	0	0	10,000	24,441	0	34,741
Nitrate Compounds	0	0	0	0	0	0	53,641	53,641
Nickel Compounds	439	0	0	0	10,700	0	0	11,139
Cyanide Compounds	500	0	0	0	0	47,844	1,656	50,000
Zinc Compounds	380	0	0	0	28,275	0	0	28,655
<b>Totals</b>	<b>3,252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48,975</b>	<b>126,823</b>	<b>55,297</b>	<b>234,347</b>
<u>Hennepin County, City of MINNEAPOLIS -- THE BUREAU ELECTRONICS GROUP --3311 BROADWAY NE --ERCID -- 271350011</u>								
Ammonia	3,000	0	0	0	6,400	0	3,200	12,600
Glycol Ethers	11,600	0	15,000	0	0	0	13,800	40,400
Formaldehyde	200	0	0	0	0	0	20,400	20,600
Sodium Dimethyldithiocarbamate	0	0	0	0	51,289	0	5,700	56,989
Copper	3,300	0	0	0	378,100	0	0	381,400
Nitric Acid	125	0	0	0	0	25,100	0	25,225

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Emergency Response Commission  
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<b>Totals</b>	<b>18,225</b>	<b>0</b>	<b>15,000</b>	<b>0</b>	<b>435,789</b>	<b>25,100</b>	<b>43,100</b>	<b>537,214</b>
<u>Hennepin County, City of MINNEAPOLIS -- TWIN CITY PLATING --641 NE HOOVER ST --ERCID -- 271350251</u>								
Nickel Compounds	10	0	0	0	4,598	0	0	4,608
<b>Totals</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,598</b>	<b>0</b>	<b>0</b>	<b>4,608</b>
<u>Hennepin County, City of MINNEAPOLIS -- UNIVERSAL PLATING &amp; RUSTPROOFING --1900 MONROE ST NE --ERCID -- 271350073</u>								
Zinc Compounds	110	0	0	0	3,658	0	0	3,768
<b>Totals</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,658</b>	<b>0</b>	<b>0</b>	<b>3,768</b>
<u>Hennepin County, City of MINNEAPOLIS -- WEATHER-RITE HEATING &amp; VENT., INC. --616 N 5TH ST --ERCID -- 271350110</u>								
Xylene (mixed isomers)	8,992	0	0	1,200	0	0	0	10,192
<b>Totals</b>	<b>8,992</b>	<b>0</b>	<b>0</b>	<b>1,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,192</b>
<u>Hennepin County, City of MINNEAPOLIS -- ZALK STEEL &amp; SUPPLY CO. --446 ST. ANTHONY PKWY --ERCID -- 271350078</u>								
Zinc Compounds	663	0	0	0	0	0	0	663
<b>Totals</b>	<b>663</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>663</b>
<u>Hennepin County, City of MINNETONKA -- ADVANCED FLEX INC. #1 --15115 MINNETONKA INDUSTRIAL RD --ERCID -- 271400001</u>								
Nitric Acid	510	0	0	0	0	2,420	10,500	13,430
Copper Compounds	6,746	0	0	0	108,880	0	0	115,626
Ammonia	19,455	0	0	0	7,970	0	3,720	31,145
<b>Totals</b>	<b>26,711</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116,850</b>	<b>2,420</b>	<b>14,220</b>	<b>160,201</b>
<u>Hennepin County, City of MINNETONKA -- ALLIEDSIGNAL INC. --15102 MINNETONKA INDUSTRIAL RD --ERCID -- 271400008</u>								
Copper	1,330	0	0	0	268,114	0	0	269,444
Formaldehyde	175	0	0	0	0	11,497	319	11,991
Nitric Acid	102	0	0	0	0	6,722	19,206	26,030
<b>Totals</b>	<b>1,607</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>268,114</b>	<b>18,219</b>	<b>19,525</b>	<b>307,465</b>
<u>Hennepin County, City of MINNETONKA -- HOLADAY CIRCUITS, INC. --11126 BREN RD W --ERCID -- 271400010</u>								
Copper	255	0	0	0	87,129	0	0	87,384
Ammonia	510	0	0	0	23,169	0	255	23,934
<b>Totals</b>	<b>765</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>110,298</b>	<b>0</b>	<b>255</b>	<b>111,318</b>
<u>Hennepin County, City of MINNETONKA -- OSMONICS, INC. --5951 CLEARWATER DRV --ERCID -- 271400006</u>								
1,4-dioxane	725	0	488	0	0	0	24,271	25,484
N,n-dimethylformamide	112	0	2,886	0	0	0	45,092	48,090
<b>Totals</b>	<b>837</b>	<b>0</b>	<b>3,374</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69,363</b>	<b>73,574</b>

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	Recovery On-site (8.2)	Recovery Off - site (8.3)	Recycled On- site (8.4)	Recycled Off - site (8.5)	Treated On- site (8.6)	Treated Off - site (8.7)	Total Chemicals Managed
<u>Hennepin County, City of MINNETONKA -- SIERRA CORP. --11401 W 47TH ST --ERCID -- 271400007</u>								
Xylene (mixed isomers)	6,985	0	19,080	0	0	0	0	26,065
1,2,4-trimethylbenzene	2,911	0	0	0	0	0	0	2,911
Toluene	4,121	0	72,504	18,625	0	0	0	95,250
Styrene	919	0	11,448	0	0	0	0	12,367
Methyl Ethyl Ketone	332	0	3,816	0	0	0	0	4,148
Glycol Ethers	910	0	7,632	0	0	0	0	8,542
Ethylbenzene	1,384	0	0	0	0	0	0	1,384
<b>Totals</b>	<b>17,562</b>	<b>0</b>	<b>114,480</b>	<b>18,625</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150,667</b>
<u>Hennepin County, City of NEW HOPE -- AURA CERAMICS, INC. --5121 WINNETKA AVE --ERCID -- 271650006</u>								
Lead Compounds	11	0	0	8,243	13,566	0	0	21,820
<b>Totals</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>8,243</b>	<b>13,566</b>	<b>0</b>	<b>0</b>	<b>21,820</b>
<u>Hennepin County, City of NEW HOPE -- AVTEC FINISHING SYSTEMS, INC. --9101 SCIENCE CENTER DRV --ERCID -- 271650001</u>								
Nitric Acid	200	0	0	0	0	5,000	19,543	24,743
Phosphoric Acid	200	0	0	0	0	400	11,460	12,060
<b>Totals</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,400</b>	<b>31,003</b>	<b>36,803</b>
<u>Hennepin County, City of NEW HOPE -- CLARIANT --9101 INTERNATIONAL PKWY --ERCID -- 271650011</u>								
Antimony Compounds	89	0	0	0	0	0	0	89
Zinc Compounds	785	0	0	0	0	0	0	785
Di(2-ethylhexyl) Phthalate	93	0	0	0	0	0	5,337	5,430
Lead Compounds	700	0	0	0	0	0	0	700
Chromium Compounds	276	0	0	0	0	0	0	276
<b>Totals</b>	<b>1,943</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,337</b>	<b>7,280</b>
<u>Hennepin County, City of NEW HOPE -- DAKOTA GROWERS PASTA COMPANY --7300 36TH AVE N --ERCID -- 271650038</u>								
Bromomethane	9,224	0	0	0	0	0	0	9,224
<b>Totals</b>	<b>9,224</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,224</b>
<u>Hennepin County, City of NEW HOPE -- INNO-FLEX CORPORATION --4929 BOONE AVE N --ERCID -- 271650048</u>								
Toluene	7,675	0	5,012	0	0	0	0	12,687
<b>Totals</b>	<b>7,675</b>	<b>0</b>	<b>5,012</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,687</b>
<u>Hennepin County, City of NEW HOPE -- TOOL PRODUCTS --5100 BOONE AVE N --ERCID -- 271650013</u>								
Copper	5,902	0	0	145,789	48,364	0	0	200,055



Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
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Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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<u>Hennepin County, City of ROCKFORD -- DIVERSIFOAM PRODUCTS --9091 CO RD 50 --ERCID -- 271950007</u>								
Chloromethane	90,616	0	0	0	0	0	0	90,616
1-chloro-1,1-difluoroethane	30,320	0	0	0	0	0	0	30,320
<b>Totals</b>	<b>120,936</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120,936</b>
<u>Hennepin County, City of ROGERS -- GRACO-KOCH CENTER --20500 DAVID KOCH AVE --ERCID -- 272000014</u>								
Nickel	2	0	0	0	8,000	0	0	8,002
Chromium	41	0	0	0	5,200	0	0	5,241
Xylene (mixed isomers)	2,100	0	0	0	8,100	0	0	10,200
Copper	7	0	0	0	85,000	0	0	85,007
<b>Totals</b>	<b>2,150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106,300</b>	<b>0</b>	<b>0</b>	<b>108,450</b>
<u>Hennepin County, City of ST. LOUIS PARK -- ALLIEDSIGNAL, INC. --3965 MEADOWBROOK RD --ERCID -- 272150003</u>								
Formaldehyde	300	0	0	0	0	11,618	469	12,387
Copper	536	0	0	0	159,775	0	0	160,311
<b>Totals</b>	<b>836</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>159,775</b>	<b>11,618</b>	<b>469</b>	<b>172,698</b>
<u>Hennepin County, City of ST. LOUIS PARK -- DOUGLAS CORP. - PLATING DIVISION --3520 XENWOOD AVE S --ERCID -- 272150034</u>								
Nickel	169	0	0	0	12,525	0	0	12,694
Chromium Compounds	2,228	0	0	27,078	17,932	0	0	47,238
Copper	66	0	0	1,741	4,513	0	0	6,320
Nitric Acid	0	0	0	0	0	0	8,634	8,634
<b>Totals</b>	<b>2,463</b>	<b>0</b>	<b>0</b>	<b>28,819</b>	<b>34,970</b>	<b>0</b>	<b>8,634</b>	<b>74,886</b>
<u>Hennepin County, City of ST. LOUIS PARK -- FLAME METALS PROCESSING CORP. --7317 W LAKE ST --ERCID -- 272150019</u>								
Tetrachloroethylene	19,500	0	0	0	900	0	0	20,400
<b>Totals</b>	<b>19,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>900</b>	<b>0</b>	<b>0</b>	<b>20,400</b>
<u>Hennepin County, City of ST. LOUIS PARK -- NORTHLAND ALUMINUM PRODUCTS, INC. --5005 COUNTY ROAD 25 --ERCID -- 272150009</u>								
Xylene (mixed isomers)	15,808	0	0	0	47	0	0	15,855
Glycol Ethers	13,912	0	0	0	163	0	0	14,075
Lead Compounds	11,509	0	0	0	0	0	0	11,509
Styrene	1,412	0	0	0	0	0	0	1,412
<b>Totals</b>	<b>42,641</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>0</b>	<b>42,851</b>
<u>Hennepin County, City of ST. LOUIS PARK -- NOVARTIS NUTRITION CORPORATION --5320 W 23RD ST --ERCID -- 272150008</u>								
Phosphoric Acid	0	0	0	0	0	12,790	45	12,835



Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

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  
Emergency Response Commission  
(Amount in Pounds)

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Chromium Compounds	24,000	0	0	0	0	0	0	24,000
Zinc Compounds	39,000	0	0	0	0	0	0	39,000
Copper Compounds	51,000	0	0	0	0	0	0	51,000
Hydrochloric Acid (aerosol forms only)	16,000	0	0	0	0	22,000	0	38,000
Sulfuric Acid (aerosol forms only)	27,000	0	0	0	0	38,000	0	65,000
Barium Compounds	1,000,000	0	0	0	0	0	0	1,000,000
<b>Totals</b>	<b>1,727,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>122,000</b>	<b>0</b>	<b>1,849,000</b>
<u>Itasca County, City of GRAND RAPIDS -- BLANDIN PAPER --115 1ST ST SW --ERCID -- 311100004</u>								
Methanol	31,000	0	0	0	0	0	0	31,000
Manganese Compounds	31,286	0	0	0	0	0	0	31,286
Ethylene Glycol	0	0	0	0	0	0	22,796	22,796
Barium Compounds	44,451	0	0	0	0	0	0	44,451
<b>Totals</b>	<b>106,737</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22,796</b>	<b>129,533</b>
<u>Itasca County, City of GRAND RAPIDS -- POTLATCH CORP. --502 CO RD 63 --ERCID -- 311100003</u>								
Methanol	17,716	0	0	0	0	144,038	0	161,754
Formaldehyde	19,484	0	0	0	0	19,769	0	39,253
<b>Totals</b>	<b>37,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,807</b>	<b>0</b>	<b>201,007</b>
<u>Jackson County, City of JACKSON -- AG-CHEM EQUIPMENT CO., INC. --202 INDUSTRIAL PARK --ERCID -- 320600007</u>								
Ethylene Glycol	0	0	0	0	0	0	0	0
Methyl Ethyl Ketone	6,500	0	90,500	0	0	0	0	97,000
Xylene (mixed isomers)	2,000	0	11,200	0	0	0	0	13,200
<b>Totals</b>	<b>8,500</b>	<b>0</b>	<b>101,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>110,200</b>
<u>Kanabec County, City of MORA -- AMERICAN MARINE, LTD --811 E MAPLE --ERCID -- 330650005</u>								
Styrene	19,352	0	0	0	0	0	0	19,352
<b>Totals</b>	<b>19,352</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,352</b>
<u>Kanabec County, City of MORA -- ENGINEERED POLYMERS CORP. --1020 E MAPLE AVE --ERCID -- 330650001</u>								
Barium Compounds	16	0	1,941	0	0	0	0	1,957
Toluene	10,445	0	1,226	0	0	0	0	11,671
Methyl Ethyl Ketone	43,694	0	5,149	0	0	0	0	48,843
<b>Totals</b>	<b>54,155</b>	<b>0</b>	<b>8,316</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>62,471</b>











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 Managed for the Calendar Year 1998

State of Minnesota  
 Department of Public Safety  
 Emergency Response Commission  
 (Amount in Pounds)

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1,1-dichloro-1-fluoroethane	8,433	0	0	0	0	0	0	8,433
<b>Totals</b>	<b>357,058</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>357,058</b>
<u>MOWER County, City of AUSTIN -- AUSTIN UTILITIES - NE POWER STATION --3701 11TH ST NE --ERCID -- 500150089</u>								
Sulfuric Acid (aerosol forms only)	29,000	0	0	0	0	128,000	0	157,000
Zinc Compounds	3,000	0	0	0	0	0	0	3,000
Barium Compounds	11,900	0	0	0	0	0	0	11,900
Copper Compounds	1,900	0	0	0	0	0	0	1,900
Hydrochloric Acid (aerosol forms only)	116,000	0	0	0	0	0	0	116,000
<b>Totals</b>	<b>161,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>128,000</b>	<b>0</b>	<b>289,800</b>
<u>Mower County, City of AUSTIN -- HORMEL FOODS CORPORATION --500 NE 14TH AVE --ERCID -- 500150002</u>								
Ammonia	7,300	0	0	0	0	0	25,347	32,647
<b>Totals</b>	<b>7,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25,347</b>	<b>32,647</b>
<u>Nicollet County, City of NORTH MANKATO -- MICO, INC. --1911 LEE BLVD --ERCID -- 520650001</u>								
Dichloromethane	11,585	0	0	2,000	640	0	0	14,225
<b>Totals</b>	<b>11,585</b>	<b>0</b>	<b>0</b>	<b>2,000</b>	<b>640</b>	<b>0</b>	<b>0</b>	<b>14,225</b>
<u>Nicollet County, City of ST. PETER -- ALUMACRAFT BOAT CO. --315 W ST. JULIEN ST --ERCID -- 520800001</u>								
Toluene	8,398	0	0	0	4,632	0	364	13,394
N-hexane	13,400	0	0	0	0	0	0	13,400
<b>Totals</b>	<b>21,798</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,632</b>	<b>0</b>	<b>364</b>	<b>26,794</b>
<u>Nobles County, City of WORTHINGTON -- SWIFT &amp; CO. --HWY 60 NE BOX 369 --ERCID -- 531500003</u>								
Phosphoric Acid	0	0	0	0	0	27,870	0	27,870
Ammonia	8,058	0	0	0	0	0	56,922	64,980
<b>Totals</b>	<b>8,058</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27,870</b>	<b>56,922</b>	<b>92,850</b>
<u>Olmsted County, City of ROCHESTER -- ASSOCIATED MILK PRODUCERS, INC. --700 1ST AVE SE --ERCID -- 550950001</u>								
Phosphoric Acid	0	0	0	18,250	0	37,453	533	56,236
Nitric Acid	0	0	0	18,250	0	123,085	1,199	142,534
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,500</b>	<b>0</b>	<b>160,538</b>	<b>1,732</b>	<b>198,770</b>
<u>Olmsted County, City of ROCHESTER -- CRENLO, INC. - PLANT 2 --2501 VALLEYHIGH DRV NW --ERCID -- 550950004</u>								
Xylene (mixed isomers)	20,293	0	1,838	0	16,430	0	0	38,561
Methyl Ethyl Ketone	2,449	0	8,114	0	74,702	0	0	85,265
N-butyl Alcohol	30,649	0	1,838	0	6,349	0	0	38,836





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Emergency Response Commission  
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Toluene	37,807	0	0	0	32,571	0	0	70,378
Xylene (mixed isomers)	29,587	0	0	0	17,766	0	0	47,353
<b>Totals</b>	<b>69,180</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,337</b>	<b>0</b>	<b>0</b>	<b>119,517</b>
<u>Otter Tail County, City of PERHAM -- DOANE PET CARE COMPANY --145 1ST AVE N --ERCID -- 563190006</u>								
Phosphoric Acid	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<u>Otter Tail County, City of PERHAM -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. --110 3RD AVE NE --ERCID -- 563190002</u>								
Nitric acid	0	0	0	0	0	223,146	0	223,146
Nitrate compounds (water dissociable)	4,239	0	0	0	0	0	0	4,239
Phosphoric acid	0	0	0	0	0	49,219	0	49,219
<b>Totals</b>	<b>4,239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272,365</b>	<b>0</b>	<b>276,604</b>
<u>Pennington County, City of THIEF RIVER FALLS -- ARCTIC CAT, INC. --601 BROOKS AVE S --ERCID -- 571150042</u>								
Styrene	91,000	0	700	0	0	0	0	91,700
<b>Totals</b>	<b>91,000</b>	<b>0</b>	<b>700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91,700</b>
<u>Pipestone County, City of PIPESTONE -- US MARINE/BAYLINER --918 SIOUX DRV --ERCID -- 590750003</u>								
Methyl Methacrylate	25,345	0	0	0	0	0	0	25,345
Styrene	206,820	0	0	0	0	0	0	206,820
Dimethyl Phthalate	309	0	0	0	0	0	0	309
<b>Totals</b>	<b>232,474</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>232,474</b>
<u>Polk County, City of CROOKSTON -- AMERICAN CRYSTAL SUGAR CO. --HWY 75 S BOX 600 --ERCID -- 600650006</u>								
Ammonia	271,780	0	0	0	0	3,346	1,190	276,316
<b>Totals</b>	<b>271,780</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,346</b>	<b>1,190</b>	<b>276,316</b>
<u>Polk County, City of CROOKSTON -- PHOENIX INDUSTRIES OF CROOKSTON, LTD. --1200 BRUCE ST PO BOX 455 --ERCID -- 600650026</u>								
Styrene	85,040	0	6,600	0	0	0	0	91,640
<b>Totals</b>	<b>85,040</b>	<b>0</b>	<b>6,600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91,640</b>
<u>Polk County, City of CROOKSTON -- U OF MN - NORTHWEST EXPERIMENT STATION --302 SELVIA HALL --ERCID -- 600650018</u>								
Ammonia	28,592	0	0	0	0	0	0	28,592
<b>Totals</b>	<b>28,592</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,592</b>
<u>Polk County, City of EAST GRAND FORKS -- AMERICAN CRYSTAL SUGAR CO. --BUSINESS HWY 2 E PO BOX 357 --ERCID -- 600750002</u>								
Ammonia	367,000	0	0	0	0	50,000	1,009	418,009
<b>Totals</b>	<b>367,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>1,009</b>	<b>418,009</b>

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
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<u>Ramsey County, City of ARDEN HILLS -- ALLIANT CONVENTIONAL MUNITIONS ,LLC --TC ARMY AMMUNITION PLANT --ERCID -- 620050015</u>								
Copper	320	0	0	0	102,000	0	0	102,320
<b>Totals</b>	<b>320</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102,000</b>	<b>0</b>	<b>0</b>	<b>102,320</b>
<u>Ramsey County, City of ARDEN HILLS -- GUIDANT/CPI --4100 HAMLIN AVE N --ERCID -- 620050004</u>								
2-chloro-1,1,1,2-tetrafluoroethane	15,302	0	0	0	0	0	0	15,302
<b>Totals</b>	<b>15,302</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,302</b>
<u>Ramsey County, City of ARDEN HILLS -- ST. PAUL METALCRAFT, INC. --3737 N LEXINGTON AVE --ERCID -- 620050012</u>								
Copper	168	0	0	0	23,491	0	0	23,659
<b>Totals</b>	<b>168</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,491</b>	<b>0</b>	<b>0</b>	<b>23,659</b>
<u>Ramsey County, City of LAUDERDALE -- TWIN CITY DIE CASTING, INC. --1070 33RD AVE SE --ERCID -- 620250001</u>								
Copper	0	0	0	0	12,088	0	0	12,088
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,088</b>	<b>0</b>	<b>0</b>	<b>12,088</b>
<u>Ramsey County, City of MAPLEWOOD -- MODINE NORTH CENTRAL, INC. --2055 WHITE BEAR AVE --ERCID -- 620350040</u>								
Copper	27	0	0	0	4,305	0	0	4,332
<b>Totals</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,305</b>	<b>0</b>	<b>0</b>	<b>4,332</b>
<u>Ramsey County, City of NEW BRIGHTON -- MICOM CORP. --475 NW 8TH AVE --ERCID -- 620450006</u>								
Ammonia	312	0	0	0	21,946	0	0	22,258
Copper	545	0	0	0	30,738	0	0	31,283
<b>Totals</b>	<b>857</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,684</b>	<b>0</b>	<b>0</b>	<b>53,541</b>
<u>Ramsey County, City of NEW BRIGHTON -- U.S. FILTER - JOHNSON SCREENS --1950 OLD HWY 8 --ERCID -- 620450016</u>								
Copper	101	0	0	0	8,120	0	0	8,221
Manganese	1	0	0	0	30,962	0	0	30,963
Nickel	120	0	0	0	71,193	0	0	71,313
Chromium	144	0	0	0	75,229	0	0	75,373
<b>Totals</b>	<b>366</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>185,504</b>	<b>0</b>	<b>0</b>	<b>185,870</b>
<u>Ramsey County, City of NEW BRIGHTON -- WOLKERSTORFER CO., INC. --348 1ST ST SW --ERCID -- 620450012</u>								
Xylene (mixed isomers)	11,184	0	396	0	1,585	0	0	13,165
<b>Totals</b>	<b>11,184</b>	<b>0</b>	<b>396</b>	<b>0</b>	<b>1,585</b>	<b>0</b>	<b>0</b>	<b>13,165</b>
<u>Ramsey County, City of ROSEVILLE -- ALLIEDSIGNAL INC. --1633 TERRACE DRV --ERCID -- 620600001</u>								
Formaldehyde	372	0	0	0	0	25,012	307	25,691
Glycol Ethers	26,700	0	0	0	5,326	52,700	0	84,726

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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Ammonia	789	0	0	0	10,807	0	5,040	16,636
Copper	1,807	0	0	0	599,936	0	0	601,743
Nitric Acid	876	0	0	0	0	7,510	37,048	45,434
Phosphoric Acid	499	0	0	0	0	80,930	0	81,429
<b>Totals</b>	<b>31,043</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>616,069</b>	<b>166,152</b>	<b>42,395</b>	<b>855,659</b>
<u>Ramsey County, City of ROSEVILLE -- BP AMOCO OIL / TWIN CITIES TERMINAL --2288 W CO RD C --ERCID -- 620600002</u>								
Ethylbenzene	26	0	0	53	6	0	0	85
Toluene	250	0	0	500	37	0	0	787
1,2,4-trimethylbenzene	28	0	0	180	8	0	0	216
N-hexane	242	0	0	69	9	0	0	320
Xylene (mixed isomers)	130	0	0	37	31	0	0	198
Benzene	180	0	0	93	11	0	0	284
<b>Totals</b>	<b>856</b>	<b>0</b>	<b>0</b>	<b>932</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>1,890</b>
<u>Ramsey County, City of ROSEVILLE -- MILSOLV CORPORATION --2340 ROSE PLACE --ERCID -- 620600003</u>								
Methanol	1,627	0	0	0	2,954	0	0	4,581
Toluene	278	0	0	0	3,611	0	0	3,889
N-hexane	667	0	0	0	0	0	0	667
Methyl Isobutyl Ketone	38	0	0	0	991	0	0	1,029
Methyl Ethyl Ketone	663	0	0	0	997	0	0	1,660
Xylene (mixed isomers)	81	0	0	0	1,543	0	0	1,624
<b>Totals</b>	<b>3,354</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,096</b>	<b>0</b>	<b>0</b>	<b>13,450</b>
<u>Ramsey County, City of ROSEVILLE -- MULTILAYER TECHNOLOGY, INC. --2520 TERMINAL RD --ERCID -- 620600083</u>								
Nitric Acid	0	0	0	0	0	5,195	9,425	14,620
Copper Compounds	812	0	0	3,466	70,831	0	0	75,109
<b>Totals</b>	<b>812</b>	<b>0</b>	<b>0</b>	<b>3,466</b>	<b>70,831</b>	<b>5,195</b>	<b>9,425</b>	<b>89,729</b>
<u>Ramsey County, City of ROSEVILLE -- PAPER, CALMENSON, &amp; CO. --2500 W CO RD B --ERCID -- 620600026</u>								
Toluene	11,000	0	0	0	190	0	0	11,190
<b>Totals</b>	<b>11,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>190</b>	<b>0</b>	<b>0</b>	<b>11,190</b>
<u>Ramsey County, City of ROSEVILLE -- U.S. FILTER RECOVERY SERVICES INC. --2430 ROSE PLACE --ERCID -- 620600023</u>								
Phosphoric Acid	0	0	0	0	0	20,043	0	20,043

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
 Managed for the Calendar Year 1998

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 Department of Public Safety  
 Emergency Response Commission  
 (Amount in Pounds)

Sorted by County, City, Facility

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Chromium	65	0	0	0	80,600	0	0	80,665
Zinc Compounds	159	0	0	0	384,000	0	0	384,159
Copper	249	0	0	2,708,008	522,000	0	0	3,230,257
Ammonia	84	0	0	1,306,381	0	0	11,698	1,318,163
Chlorine	255	0	0	0	0	58,500	0	58,755
Nickel	154	0	0	16,600	70,400	0	0	87,154
<b>Totals</b>	<b>966</b>	<b>0</b>	<b>0</b>	<b>4,030,989</b>	<b>1,057,000</b>	<b>78,543</b>	<b>11,698</b>	<b>5,179,196</b>
<u>Ramsey County, City of SHOREVIEW -- MULTI-CLEAN --600 CARDIGAN RD --ERCID -- 620750017</u>								
Glycol Ethers	276	0	787	1,430	0	0	2,611	5,104
<b>Totals</b>	<b>276</b>	<b>0</b>	<b>787</b>	<b>1,430</b>	<b>0</b>	<b>0</b>	<b>2,611</b>	<b>5,104</b>
<u>Ramsey County, City of ST. PAUL -- 3M COMPANY --900 BUSH AVE --ERCID -- 620700045</u>								
Methyl Ethyl Ketone	52,578	9,326	1,465	0	0	349,900	10,375	423,644
Methyl Isobutyl Ketone	5,820	2	51	0	0	43,596	363	49,832
Phenol	28,186	0	138	0	0	62,193	1,081	91,598
Methanol	1,434	5	11	0	0	9,538	78	11,066
Di(2-ethylhexyl) Phthalate	0	0	0	0	0	0	0	0
Toluene	270,788	219,315	11,449	0	0	1,590,026	81,096	2,172,674
Cyclohexane	9,684	0	53	0	0	78,315	375	88,427
1,2,4-trimethylbenzene	47,363	0	181	0	0	0	1,283	48,827
Formaldehyde	9,332	0	59	0	0	20,525	421	30,337
Ethylbenzene	2,170	0	13	0	0	17,299	98	19,580
2-ethoxyethanol	9,227	0	4,730	0	0	17,385	33,508	64,850
Zinc Compounds	860	0	0	0	0	0	0	860
Xylene (mixed isomers)	21,701	0	209	0	0	120,052	1,485	143,447
Nickel	10	0	0	0	24,200	0	0	24,210
Toluenediisocyanate (mixed isomers)	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>459,153</b>	<b>228,648</b>	<b>18,359</b>	<b>0</b>	<b>24,200</b>	<b>2,308,829</b>	<b>130,163</b>	<b>3,169,352</b>
<u>Ramsey County, City of ST. PAUL -- ADVANCE CORPORATION --958 PROSPERITY AVE --ERCID -- 620700356</u>								
Nitric Acid	0	0	0	0	0	20,601	0	20,601
Nitrate Compounds	0	0	0	0	0	0	37,168	37,168

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20,601</b>	<b>37,168</b>	<b>57,769</b>
<u>Ramsey County, City of ST. PAUL -- AMERICAN NATIONAL CAN CO. --139 EVA ST --ERCID -- 620700003</u>								
N-butyl Alcohol	114,153	0	40	0	0	0	0	114,193
Glycol Ethers	142,595	0	209	0	0	0	0	142,804
Hydrogen Fluoride	16	0	0	0	0	16,152	0	16,168
Manganese	61	0	0	0	0	0	0	61
<b>Totals</b>	<b>256,825</b>	<b>0</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>16,152</b>	<b>0</b>	<b>273,226</b>
<u>Ramsey County, City of ST. PAUL -- ASHLAND CHEMICAL CO. --395 JAMES AVE --ERCID -- 620700077</u>								
1,2,4-trimethylbenzene	40	0	679	0	0	0	0	719
Methyl Isobutyl Ketone	214	0	495	0	0	0	0	709
N-hexane	1,000	0	1,482	0	0	0	0	2,482
Methanol	880	0	4,840	0	0	0	0	5,720
Xylene (mixed isomers)	570	0	7,920	0	0	0	0	8,490
Glycol Ethers	500	0	2,861	0	0	0	0	3,361
Methyl Ethyl Ketone	550	0	1,975	0	0	0	0	2,525
Toluene	1,090	0	8,540	0	0	0	0	9,630
<b>Totals</b>	<b>4,844</b>	<b>0</b>	<b>28,792</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33,636</b>
<u>Ramsey County, City of ST. PAUL -- B. BROS. PKG., INC. DBA FOX PKG. CO. --51 E MARYLAND AVE --ERCID -- 620700241</u>								
Methanol	74,363	0	0	0	0	0	0	74,363
<b>Totals</b>	<b>74,363</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74,363</b>
<u>Ramsey County, City of ST. PAUL -- CENTURY CIRCUITS &amp; ELECTRONICS, INC. --155 EATON ST --ERCID -- 620700011</u>								
Copper	549	0	0	0	18,472	0	0	19,021
<b>Totals</b>	<b>549</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,472</b>	<b>0</b>	<b>0</b>	<b>19,021</b>
<u>Ramsey County, City of ST. PAUL -- CMS HARTZELL MFG. CO. --2516 WABASH AVE --ERCID -- 620700105</u>								
Copper	0	0	0	0	5,872	0	0	5,872
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,872</b>	<b>0</b>	<b>0</b>	<b>5,872</b>
<u>Ramsey County, City of ST. PAUL -- COOPERATIVE PLATING CO. --1605 IGLEHART AVE --ERCID -- 620700181</u>								
Cyanide Compounds	185	0	0	0	0	0	4,155	4,340
Zinc Compounds	950	0	0	0	1,200	0	0	2,150
Nickel Compounds	325	0	0	0	600	0	0	925
Nitric Acid	3,015	0	0	0	0	14,123	42,086	59,224

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Department of Public Safety  
Emergency Response Commission  
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<b>Totals</b>	<b>4,475</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,800</b>	<b>14,123</b>	<b>46,241</b>	<b>66,639</b>
<u>Ramsey County, City of ST. PAUL -- ELECTRO-PLATING ENGINEERING CO INC. --45 W IVY AVE --ERCID -- 620700017</u>								
Zinc Compounds	118	0	0	0	38,988	0	0	39,106
Nickel Compounds	40	0	0	0	16,908	0	0	16,948
<b>Totals</b>	<b>158</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55,896</b>	<b>0</b>	<b>0</b>	<b>56,054</b>
<u>Ramsey County, City of ST. PAUL -- FORD - TWIN CITIES ASSEMBLY PLANT --966 S MISSISSIPPI RIVER BLVD --ERCID -- 620700020</u>								
Manganese Compounds	2,400	0	0	0	0	0	0	2,400
1,2,4-trimethylbenzene	46,000	0	0	0	17,000	42,000	0	105,000
Ethylbenzene	91,000	0	0	0	130,000	29,000	0	250,000
Xylene (mixed isomers)	360,000	0	0	0	550,000	160,000	0	1,070,000
Nickel Compounds	5,300	0	0	0	0	0	0	5,300
Phosphoric Acid	920	0	0	0	36	900	0	1,856
Zinc Compounds	5,700	0	0	0	60	0	0	5,760
Toluene	34,000	0	0	0	74,000	12,000	0	120,000
Ethylene Glycol	59	0	0	0	0	0	2,900	2,959
Glycol Ethers	44,000	0	0	0	9,300	71,000	13,000	137,300
Methanol	32,000	0	0	0	6,900	28,000	0	66,900
Methyl Ethyl Ketone	17,000	0	0	0	2,800	9,000	0	28,800
Methyl Isobutyl Ketone	150,000	0	0	0	64,000	12,000	0	226,000
N-butyl Alcohol	78,000	0	0	0	20,000	65,000	0	163,000
<b>Totals</b>	<b>866,379</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>874,096</b>	<b>428,900</b>	<b>15,900</b>	<b>2,185,275</b>
<u>Ramsey County, City of ST. PAUL -- GENERAL FOAM OF MN. INC. --1800-1810 COMO AVE --ERCID -- 620700023</u>								
Dichloromethane	18,432	0	0	0	0	0	13,370	31,802
Toluenediisocyanate (mixed isomers)	77	0	0	0	0	0	3,000	3,077
<b>Totals</b>	<b>18,509</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,370</b>	<b>34,879</b>
<u>Ramsey County, City of ST. PAUL -- GILLETTE CO. --310 E 5TH ST --ERCID -- 620700025</u>								
Glycol Ethers	0	0	0	0	0	0	2,400	2,400
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,400</b>	<b>2,400</b>
<u>Ramsey County, City of ST. PAUL -- GROSS-GIVEN MFG. CO. --75 W PLATO BLVD --ERCID -- 620700108</u>								
Diisocyanates	5	0	0	0	0	0	0	5



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Emergency Response Commission  
(Amount in Pounds)

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Nickel Compounds	28,591	0	0	0	0	0	0	28,591
Lead Compounds	93,960	0	0	0	0	0	0	93,960
Copper Compounds	428,187	0	0	0	0	0	0	428,187
<b>Totals</b>	<b>1,241,207</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,241,207</b>
<u>Ramsey County, City of ST. PAUL -- NORTH STAR STEEL-MINNESOTA --1678 RED ROCK RD --ERCID -- 620700051</u>								
Nickel Compounds	64	0	0	0	5,946	0	0	6,010
Manganese Compounds	5,062	0	0	0	623,350	0	0	628,412
Copper Compounds	454	0	0	0	74,418	0	0	74,872
Barium Compounds	2,505	0	0	0	5,946	0	0	8,451
Zinc Compounds	18,449	0	0	0	3,369,926	0	0	3,388,375
Molybdenum Trioxide	19	0	0	0	0	0	0	19
Lead Compounds	12,932	0	0	0	333,732	0	0	346,664
Chromium Compounds	2,232	0	0	0	53,320	0	0	55,552
<b>Totals</b>	<b>41,717</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,466,638</b>	<b>0</b>	<b>0</b>	<b>4,508,355</b>
<u>Ramsey County, City of ST. PAUL -- NSP - HIGH BRIDGE PLANT --501 SHEPARD RD --ERCID -- 620700031</u>								
Hydrogen Fluoride	22,000	0	0	0	0	22,000	0	44,000
Barium Compounds	150,000	0	0	0	0	0	0	150,000
Hydrochloric Acid (aerosol forms only)	6,800	0	0	0	0	27,000	0	33,800
<b>Totals</b>	<b>178,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49,000</b>	<b>0</b>	<b>227,800</b>
<u>Ramsey County, City of ST. PAUL -- PLATING, INC. --888 N PRIOR AVE --ERCID -- 620700054</u>								
Cyanide Compounds	36	0	0	0	0	0	255	291
Zinc Compounds	7	0	0	0	3,266	0	0	3,273
<b>Totals</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,266</b>	<b>0</b>	<b>255</b>	<b>3,564</b>
<u>Ramsey County, City of ST. PAUL -- QUEBECOR PRINTING ST. PAUL --1999 SHEPARD RD --ERCID -- 620700193</u>								
Methanol	20,512	0	0	0	0	0	0	20,512
<b>Totals</b>	<b>20,512</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20,512</b>
<u>Ramsey County, City of ST. PAUL -- SILGAN CONTAINERS MFG. CORP. --755 N PRIOR AVE --ERCID -- 620700002</u>								
N-hexane	91,999	0	14	0	0	0	0	92,013
<b>Totals</b>	<b>91,999</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>92,013</b>
<u>Ramsey County, City of ST. PAUL -- ST. PAUL BRASS FOUNDRY --954 W MINNEHAHA AVE. --ERCID -- 620700065</u>								
Copper	5,954	0	0	0	98,359	0	0	104,313

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Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	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
<b>Totals</b>	<b>5,954</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98,359</b>	<b>0</b>	<b>0</b>	<b>104,313</b>
<u>Ramsey County, City of ST. PAUL -- TAMOR CORPORATION --224 RYAN AVE --ERCID -- 620700104</u>								
Styrene	422	0	55	0	0	0	1,300	1,777
<b>Totals</b>	<b>422</b>	<b>0</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,300</b>	<b>1,777</b>
<u>Ramsey County, City of ST. PAUL -- TI-KROMATIC PAINTS, INC. --2492 DOSWELL AVE --ERCID -- 620700071</u>								
Xylene (mixed isomers)	4,993	0	1,301	4,660	0	0	0	10,954
Toluene	1,453	0	2,057	1,297	0	0	0	4,807
Methyl Isobutyl Ketone	597	0	1,331	657	0	0	0	2,585
N-butyl Alcohol	736	0	0	0	0	0	0	736
Ethylbenzene	850	0	199	837	0	0	0	1,886
Glycol Ethers	780	0	482	0	0	0	0	1,262
<b>Totals</b>	<b>9,409</b>	<b>0</b>	<b>5,370</b>	<b>7,451</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22,230</b>
<u>Ramsey County, City of ST. PAUL -- VAN WATERS &amp; ROGERS, INC. --845 TERRACE CT --ERCID -- 620700079</u>								
Nitric Acid	33	0	0	0	0	3,800	0	3,833
N,n-dimethylformamide	12	0	0	0	91	0	805	908
<b>Totals</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>3,800</b>	<b>805</b>	<b>4,741</b>
<u>Ramsey County, City of ST. PAUL -- VIKING DRILL &amp; TOOL INC. --355 STATE ST --ERCID -- 620700369</u>								
Barium Compounds	10	0	0	0	0	0	11,583	11,593
Chromium	650	0	0	0	4,863	0	0	5,513
Trichloroethylene	6,837	0	11,643	101,640	0	0	0	120,120
<b>Totals</b>	<b>7,497</b>	<b>0</b>	<b>11,643</b>	<b>101,640</b>	<b>4,863</b>	<b>0</b>	<b>11,583</b>	<b>137,226</b>
<u>Ramsey County, City of ST. PAUL -- WALDORF CORP. (A ROCK-TENN COMPANY) --2250 WABASH AVE --ERCID -- 620700081</u>								
Toluene	48,483	67,655	1,451	8,800	0	0	0	126,389
<b>Totals</b>	<b>48,483</b>	<b>67,655</b>	<b>1,451</b>	<b>8,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>126,389</b>
<u>Ramsey County, City of ST. PAUL -- WORUM CHEMICAL AND FIBERGLASS --2130 ENERGY PARK DRV --ERCID -- 620700082</u>								
Methyl Ethyl Ketone	861	0	11,139	0	0	0	0	12,000
Styrene	37	0	0	0	0	0	0	37
Toluene-2,4-diisocyanate	0	0	0	0	0	0	0	0
Methanol	575	0	2,538	0	0	0	0	3,113
Toluene	4,092	0	39,688	0	0	0	0	43,780
Xylene (mixed isomers)	226	0	18,556	0	0	0	0	18,782



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<u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. --112N 35W PAXTON-NE 1/4 SEC. OF 21 --ERCID -- 6</u>								
Ammonia	9,388	0	0	0	0	0	0	9,388
<b>Totals</b>	<b>9,388</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,388</b>
<u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. --112N 35W PAXTON-SE 1/4 SEC. OF 19 --ERCID -- 6</u>								
Ammonia	28,182	0	0	0	0	0	0	28,182
<b>Totals</b>	<b>28,182</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,182</b>
<u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. --112N 36W REDWOOD-PT. OF SEC. 25.26.35.36 --E</u>								
Ammonia	54,320	0	0	0	0	0	0	54,320
<b>Totals</b>	<b>54,320</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54,320</b>
<u>Renville County, City of RENVILLE -- SOUTHERN MN BEET SUGAR COOPERATIVE --HWY 212 E --ERCID -- 651550009</u>								
Ammonia	136,790	0	0	0	0	0	0	136,790
<b>Totals</b>	<b>136,790</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>136,790</b>
<u>Rice County, City of FARIBAULT -- CROWN CORK &amp; SEAL CO. --4TH ST &amp; PARK AVE BOX 38 --ERCID -- 660300017</u>								
Methyl Isobutyl Ketone	12,000	0	0	0	0	66,000	0	78,000
N-butyl Alcohol	14,000	0	6,800	0	6,800	26,000	0	53,600
Methyl Ethyl Ketone	11,000	0	0	0	0	0	0	11,000
Glycol Ethers	9,600	0	7,500	0	0	17,000	0	34,100
Xylene (mixed isomers)	34,000	0	36,000	0	36,000	39,000	0	145,000
N-hexane	24,000	0	0	0	0	0	0	24,000
<b>Totals</b>	<b>104,600</b>	<b>0</b>	<b>50,300</b>	<b>0</b>	<b>42,800</b>	<b>148,000</b>	<b>0</b>	<b>345,700</b>
<u>Rice County, City of FARIBAULT -- K &amp; G MANUFACTURING --226 PARK AVE --ERCID -- 660300078</u>								
Trichloroethylene	24,420	0	0	0	3,300	0	0	27,720
<b>Totals</b>	<b>24,420</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,300</b>	<b>0</b>	<b>0</b>	<b>27,720</b>
<u>Rice County, City of FARIBAULT -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. --1612 NW 7TH ST --ERCID -- 660300003</u>								
Nitrate Compounds	0	0	0	0	0	0	9,668	9,668
Nitric Acid	0	0	0	0	0	24,439	0	24,439
Phosphoric Acid	0	0	0	0	0	10,537	0	10,537
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34,976</b>	<b>9,668</b>	<b>44,644</b>
<u>Rice County, City of FARIBAULT -- MCQUAY INTERNATIONAL --300 24TH ST NW --ERCID -- 660300004</u>								
Zinc (fume or dust)	1	0	0	0	132,842	0	0	132,843
Copper	81	0	0	0	117,686	0	0	117,767

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Nickel	2	0	0	0	6,197	0	0	6,199
Aluminum (fume or dust)	3	0	0	0	261,401	0	0	261,404
Manganese	3	0	0	0	25,529	0	0	25,532
Chlorodifluoromethane	714	0	0	0	1,200	0	0	1,914
Chromium	1	0	0	0	6,197	0	0	6,198
<b>Totals</b>	<b>805</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>551,052</b>	<b>0</b>	<b>0</b>	<b>551,857</b>
<u>Rice County, City of NORTHFIELD -- SHELDAHL, INC. - EAST FACILITY --805 HWY 3 N --ERCID -- 660600002</u>								
Decabromodiphenyl Oxide	5,607	0	0	0	0	0	633	6,240
Methyl Ethyl Ketone	12,800	0	31,571	0	0	268,690	0	313,061
Nitrate Compounds	0	0	0	0	0	40,765	1,191	41,956
Ammonia	1,047	0	0	0	80,253	0	13,364	94,664
Lead Compounds	602	0	0	0	8,998	0	0	9,600
Toluene	34,919	0	78,061	0	0	660,911	0	773,891
Antimony Compounds	2,960	0	0	0	0	0	0	2,960
Copper Compounds	8,425	0	0	0	909,098	0	0	917,523
Nitric Acid	175	0	0	0	0	86,488	0	86,663
Methanol	17,127	0	347	0	0	1,961	0	19,435
<b>Totals</b>	<b>83,662</b>	<b>0</b>	<b>109,979</b>	<b>0</b>	<b>998,349</b>	<b>1,058,815</b>	<b>15,188</b>	<b>2,265,993</b>
<u>Rock County, City of LUVERNE -- GOLD N PLUMP POULTRY INC --HWY 17 W --ERCID -- 670550006</u>								
Ammonia	28,000	0	0	0	0	0	0	28,000
<b>Totals</b>	<b>28,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,000</b>
<u>Roseau County, City of ROSEAU -- POLARIS INDUSTRIES, INC. --301 5TH AVE SW --ERCID -- 681550001</u>								
Methyl Ethyl Ketone	33,000	0	8,100	0	0	0	0	41,100
Glycol Ethers	18,000	0	0	0	0	0	0	18,000
Toluene	21,000	0	960	0	0	0	0	21,960
Xylene (mixed isomers)	8,200	0	3,200	0	0	0	0	11,400
<b>Totals</b>	<b>80,200</b>	<b>0</b>	<b>12,260</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>92,460</b>
<u>Scott County, City of NEW PRAGUE -- MVE, INC. - MAIN PLANT --407 7TH ST NW --ERCID -- 700700001</u>								
Nickel	210	0	0	0	16,700	0	0	16,910
Chromium	40	0	0	0	37,500	0	0	37,540

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Manganese	29	0	0	0	16,800	0	0	16,829
<b>Totals</b>	<b>279</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>71,000</b>	<b>0</b>	<b>0</b>	<b>71,279</b>
<u>Scott County, City of SAVAGE -- CONTINENTAL MACHINES, INC. --5505 W 123RD ST --ERCID -- 700820003</u>								
Methanol	30,267	0	847	0	0	0	0	31,114
<b>Totals</b>	<b>30,267</b>	<b>0</b>	<b>847</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31,114</b>
<u>Scott County, City of SAVAGE -- SILGAN CONTAINERS MFG. CORP. --12130 LYNN AVE --ERCID -- 700820004</u>								
Methyl Isobutyl Ketone	1,655	8,930	1,709	0	0	5,954	0	18,248
N-butyl Alcohol	6,873	34,009	6,525	0	0	22,672	0	70,079
Ethylbenzene	3,296	14,464	5,366	0	0	9,643	0	32,769
N-hexane	15,544	0	1,155	0	0	0	0	16,699
Xylene (mixed isomers)	16,873	71,649	24,678	0	0	47,766	0	160,966
1,2,4-trimethylbenzene	3,408	16,433	3,181	0	0	10,955	0	33,977
Glycol Ethers	30,932	123,419	38,180	0	0	82,280	0	274,811
<b>Totals</b>	<b>78,581</b>	<b>268,904</b>	<b>80,794</b>	<b>0</b>	<b>0</b>	<b>179,270</b>	<b>0</b>	<b>607,549</b>
<u>Scott County, City of SHAKOPEE -- ADC TELECOMMUNICATIONS --1187 PARK PLACE --ERCID -- 700850057</u>								
Dichloromethane	5,555	0	0	0	0	0	2,723	8,278
Copper	1	0	0	0	650,913	0	0	650,914
Nickel	0	0	0	0	53,224	0	0	53,224
<b>Totals</b>	<b>5,556</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>704,137</b>	<b>0</b>	<b>2,723</b>	<b>712,416</b>
<u>Scott County, City of SHAKOPEE -- CONKLIN COMPANY, INC. --551 VALLEY PARK DRV --ERCID -- 700850006</u>								
Xylene (mixed isomers)	71	0	960	0	0	0	0	1,031
Methanol	22	0	2,400	0	0	0	0	2,422
<b>Totals</b>	<b>93</b>	<b>0</b>	<b>3,360</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,453</b>
<u>Scott County, City of SHAKOPEE -- FREMONT INDUSTRIES, INC. --4400 VALLEY INDUSTRIAL BLVD N --ERCID -- 700850008</u>								
Phosphoric Acid	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<u>Scott County, City of SHAKOPEE -- RAHR MALTING CO. --800 W 1ST AVE --ERCID -- 700850010</u>								
Chlorine	11,900	0	0	0	0	0	17,800	29,700
<b>Totals</b>	<b>11,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,800</b>	<b>29,700</b>
<u>Sherburne County, City of BECKER -- BECKER RDF ASH LANDFILL --13700 SHERBURNE AVE S --ERCID -- 710090018</u>								
Ammonia	51	0	0	0	0	0	0	51

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Antimony Compounds	18,000	0	0	0	0	0	0	18,000
Chromium Compounds	12,000	0	0	0	0	0	0	12,000
Copper Compounds	130,000	0	0	0	0	0	0	130,000
Lead Compounds	140,000	0	0	0	0	0	0	140,000
Manganese Compounds	10,000	0	0	0	0	0	0	10,000
Molybdenum Trioxide	3,900	0	0	0	0	0	0	3,900
Nickel Compounds	13,000	0	0	0	0	0	0	13,000
Zinc Compounds	350,000	0	0	0	0	0	0	350,000
Barium Compounds	67,000	0	0	0	0	0	0	67,000
<b>Totals</b>	<b>743,951</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>743,951</b>
<u>Sherburne County, City of BECKER -- LIBERTY PAPER INC --13500 LIBERTY LANE --ERCID -- 710090014</u>								
Glycol Ethers	9,020	0	0	0	0	0	36,083	45,103
<b>Totals</b>	<b>9,020</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,083</b>	<b>45,103</b>
<u>Sherburne County, City of BECKER -- NSP - SHERCO PLANT --13999 INDUSTRIAL BLVD --ERCID -- 710090001</u>								
Barium Compounds	5,600,000	0	0	0	0	0	0	5,600,000
Manganese Compounds	620,000	0	0	0	0	0	0	620,000
Chromium Compounds	68,000	0	0	0	0	0	0	68,000
Antimony Compounds	4,300	0	0	0	0	0	0	4,300
Ammonia	27,000	0	0	0	0	3,100	0	30,100
Hydrochloric Acid (aerosol forms only)	6,400	0	0	0	0	210,000	0	216,400
Hydrogen Fluoride	17,000	0	0	0	0	280,000	0	297,000
Lead Compounds	47,000	0	0	0	0	0	0	47,000
Zinc Compounds	87,000	0	0	0	0	0	0	87,000
Sulfuric Acid (aerosol forms only)	28,000	0	0	0	0	96,000	0	124,000
Nickel Compounds	55,000	0	0	0	0	0	0	55,000
Molybdenum Trioxide	20,000	0	0	0	0	0	0	20,000
Copper Compounds	130,000	0	0	0	0	0	0	130,000
<b>Totals</b>	<b>6,709,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>589,100</b>	<b>0</b>	<b>7,298,800</b>
<u>Sherburne County, City of PRINCETON -- CRYSTAL CABINET WORKS, INC. --1100 CRYSTAL DRV --ERCID -- 710050001</u>								
Methyl Ethyl Ketone	6,685	0	0	0	17,300	0	0	23,985

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N-butyl Alcohol	9,014	0	0	0	7,540	0	0	16,554
Toluene	336	0	0	0	84,365	0	0	84,701
Methyl Isobutyl Ketone	7,614	0	0	0	6,021	0	0	13,635
Glycol Ethers	12,337	0	0	0	0	0	0	12,337
Ethylbenzene	14,237	0	0	0	275	0	0	14,512
Xylene (mixed isomers)	464,263	0	0	0	33,026	0	0	497,289
Methanol	826	0	0	0	14,596	0	0	15,422
<b>Totals</b>	<b>515,312</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163,123</b>	<b>0</b>	<b>0</b>	<b>678,435</b>
<u>Sibley County, City of GAYLORD -- M. G. WALDBAUM CO. --120 TOWER ST. SOUTH --ERCID -- 720400012</u>								
Nitric Acid	0	0	0	0	0	21,023	0	21,023
Phosphoric Acid	0	0	0	0	0	29,202	0	29,202
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,225</b>	<b>0</b>	<b>50,225</b>
<u>St Louis County, City of AURORA -- LASKIN ENERGY CENTER - MN POWER --5699 COLBY LAKE RD --ERCID -- 690350001</u>								
Barium Compounds	130,000	0	0	0	0	0	0	130,000
<b>Totals</b>	<b>130,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>130,000</b>
<u>St Louis County, City of BIWABIK -- MINNESOTA EXPLOSIVES CO. --5392 VERMILION TRAIL --ERCID -- 690580002</u>								
Nitrate compounds (water dissociable)	650	0	0	600	0	50	0	1,300
Ammonia	185	0	0	140	0	35	0	360
<b>Totals</b>	<b>835</b>	<b>0</b>	<b>0</b>	<b>740</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>1,660</b>
<u>St Louis County, City of CHISHOLM -- MINNESOTA TWIST DRILL, INC. --611 WEST DRIVE --ERCID -- 690950008</u>								
Barium Compounds	28,287	0	0	0	0	0	0	28,287
Chromium	20,553	0	0	0	4,291	0	0	24,844
Trichloroethylene	1,389	0	7,372	0	0	0	0	8,761
<b>Totals</b>	<b>50,229</b>	<b>0</b>	<b>7,372</b>	<b>0</b>	<b>4,291</b>	<b>0</b>	<b>0</b>	<b>61,892</b>
<u>St Louis County, City of COOK -- POTLATCH CORPORATION --9358 HWY 53 S --ERCID -- 691100001</u>								
Formaldehyde	21,054	0	0	0	0	15,179	0	36,233
Methanol	12,623	0	0	0	0	80,872	0	93,495
<b>Totals</b>	<b>33,677</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>96,051</b>	<b>0</b>	<b>129,728</b>
<u>St Louis County, City of DULUTH -- A.E. STALEY MANUFACTURING COMPANY --110 SPRING ST --ERCID -- 691250003</u>								
Maleic Anhydride	64	0	0	0	0	3,424	0	3,488
<b>Totals</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,424</b>	<b>0</b>	<b>3,488</b>

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	Recovery On-site (8.2)	Recovery Off - site (8.3)	Recycled On- site (8.4)	Recycled Off - site (8.5)	Treated On- site (8.6)	Treated Off - site (8.7)	Total Chemicals Managed
<u>St Louis County, City of DULUTH -- GEORGIA-PACIFIC CORPORATION --1220 RAILROAD STREET --ERCID -- 691250014</u>								
Methanol	148,048	0	0	0	0	0	0	148,048
Nitric Acid	0	0	0	0	0	253,717	0	253,717
<b>Totals</b>	<b>148,048</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>253,717</b>	<b>0</b>	<b>401,765</b>
<u>St Louis County, City of DULUTH -- LAKE SUPERIOR PAPER IND. --100 N CENTRAL AVE --ERCID -- 691250008</u>								
Methanol	76,000	0	0	0	0	0	57,000	133,000
<b>Totals</b>	<b>76,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57,000</b>	<b>133,000</b>
<u>St Louis County, City of DULUTH -- M.E. INTERNATIONAL - DULUTH --200 E CARTERETT ST --ERCID -- 691250013</u>								
Molybdenum Trioxide	30	0	0	2,400	6,000	0	0	8,430
Chromium	160	0	0	0	75,000	0	0	75,160
Nickel	10	0	0	0	500	0	0	510
Manganese	230	0	0	0	35,500	0	0	35,730
Barium	6,800	0	0	0	8,400	0	0	15,200
<b>Totals</b>	<b>7,230</b>	<b>0</b>	<b>0</b>	<b>2,400</b>	<b>125,400</b>	<b>0</b>	<b>0</b>	<b>135,030</b>
<u>St Louis County, City of HIBBING -- INTERMET NORTHERN FOUNDRY --555 W 25TH ST --ERCID -- 692350004</u>								
Copper	337	0	0	0	968	0	0	1,305
<b>Totals</b>	<b>337</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>968</b>	<b>0</b>	<b>0</b>	<b>1,305</b>
<u>St Louis County, City of HIBBING -- L &amp; M RADIATOR, INC. --1414 E 37TH ST --ERCID -- 692350038</u>								
Copper	10	0	0	0	66,936	0	0	66,946
<b>Totals</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>66,936</b>	<b>0</b>	<b>0</b>	<b>66,946</b>
<u>St Louis County, City of HIBBING -- NOBLE INDUSTRIES, LTD. --3430 E 13TH AVE --ERCID -- 692350002</u>								
Copper	150	0	0	0	17,200	0	0	17,350
<b>Totals</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,200</b>	<b>0</b>	<b>0</b>	<b>17,350</b>
<u>St Louis County, City of VIRGINIA -- GEORGIA-PACIFIC RESINS, INC. --1507 SOUTHERN DRV --ERCID -- 694400002</u>								
Formaldehyde	901	0	0	0	0	0	0	901
4,4'-isopropylidenediphenol	0	0	0	0	0	0	0	0
Phenol	373	0	0	0	0	0	0	373
Methanol	1,470	0	0	0	0	0	0	1,470
<b>Totals</b>	<b>2,744</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,744</b>
<u>Stearns County, City of ALBANY -- KRAFT FOODS --600 RAILROAD AVE BOX 300 --ERCID -- 730040001</u>								
Phosphoric Acid	0	0	0	0	0	28,867	19	28,886

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
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Emergency Response Commission  
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<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,867</b>	<b>19</b>	<b>28,886</b>
<u>Stearns County, City of COLD SPRING -- GOLD'N PLUMP POULTRY --14244 STATE HWY 23 E --ERCID -- 730400001</u>								
Ammonia	0	0	0	0	0	0	0	0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<u>Stearns County, City of HOLDINGFORD -- POLAR TANK TRAILER, INC. --12810 CO RD 17 --ERCID -- 731050001</u>								
Manganese	44	0	0	0	26,000	0	0	26,044
Chromium	37	0	0	0	141,000	0	0	141,037
Nickel	21	0	0	0	66,000	0	0	66,021
<b>Totals</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>233,000</b>	<b>0</b>	<b>0</b>	<b>233,102</b>
<u>Stearns County, City of MELROSE -- CARSTENS INDUSTRIES, INC. --733 W MAIN ST BOX 185 --ERCID -- 731500010</u>								
Styrene	36,828	0	0	0	0	0	0	36,828
<b>Totals</b>	<b>36,828</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,828</b>
<u>Stearns County, City of MELROSE -- KRAFT FOODS, INC. --1000 E KRAFT DRV --ERCID -- 731500003</u>								
Nitrate Compounds	0	0	0	0	0	0	726,357	726,357
Phosphoric Acid	0	0	0	0	0	22,054	0	22,054
Nitric Acid	0	0	0	0	0	741,180	0	741,180
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>763,234</b>	<b>726,357</b>	<b>1,489,591</b>
<u>Stearns County, City of PAYNESVILLE -- ASSOCIATED MILK PRODUCERS, INC. --200 RAILROAD ST --ERCID -- 731840001</u>								
Nitric Acid	0	0	0	44,000	0	30,000	0	74,000
Phosphoric Acid	0	0	0	9,000	0	6,000	0	15,000
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53,000</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>89,000</b>
<u>Stearns County, City of PAYNESVILLE -- CROMWELL MOLDING --27546 HWY 23 --ERCID -- 731840025</u>								
Styrene	9,856	0	0	0	0	0	0	9,856
<b>Totals</b>	<b>9,856</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,856</b>
<u>Stearns County, City of SARTELL -- DEZURIK --250 RIVERSIDE AVE N --ERCID -- 732620002</u>								
Phenol	10,280	0	0	0	0	0	0	10,280
<b>Totals</b>	<b>10,280</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,280</b>
<u>Stearns County, City of ST. CLOUD -- DCI, INC. --600 N 54TH AVE --ERCID -- 732300056</u>								
Chromium Compounds	1,420	0	0	0	74,000	0	0	75,420
Phosphoric Acid	1	0	0	0	0	5,200	18,800	24,001
Nickel Compounds	870	0	0	0	36,000	0	0	36,870

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State of Minnesota  
Department of Public Safety  
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Manganese Compounds	174	0	0	0	7,600	0	0	7,774
<b>Totals</b>	<b>2,465</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>117,600</b>	<b>5,200</b>	<b>18,800</b>	<b>144,065</b>
<u>Stearns County, City of ST. CLOUD -- FRIGIDAIRE HOME PRODUCTS-FREEZERS --701 N 33RD AVE --ERCID -- 732300008</u>								
Phosphoric Acid	35	0	0	0	0	0	3,500	3,535
Diisocyanates (includes only 20 chemicals)	20,000	0	0	0	12,000	0	0	32,000
1,1-dichloro-1-fluoroethane	391,000	0	0	0	24,000	0	0	415,000
<b>Totals</b>	<b>411,035</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,000</b>	<b>0</b>	<b>3,500</b>	<b>450,535</b>
<u>Stearns County, City of ST. CLOUD -- GREDE - ST. CLOUD --5200 FOUNDRY CIRCLE --ERCID -- 732300084</u>								
Aluminum Oxide (fibrous forms)	29,000	0	0	0	0	0	0	29,000
Chromium	40,000	0	0	1,700	10,000	0	0	51,700
Manganese	5,800	0	0	62,000	1,500	0	0	69,300
Phenol	330	0	0	0	0	820	66	1,216
Nickel	20,000	0	0	2,000	5,000	0	0	27,000
Diisocyanates	490	0	0	0	0	7,800	3	8,293
Copper	2,000	0	0	35,000	410	0	0	37,410
<b>Totals</b>	<b>97,620</b>	<b>0</b>	<b>0</b>	<b>100,700</b>	<b>16,910</b>	<b>8,620</b>	<b>69</b>	<b>223,919</b>
<u>Stearns County, City of ST. CLOUD -- VISION EASE LENS, INC. --700 54TH AVE N --ERCID -- 732300020</u>								
Barium	0	0	0	0	17,830	0	0	17,830
Lead	59	0	0	0	46,671	0	0	46,730
Trichloroethylene	11,271	0	969	17,204	0	0	0	29,444
<b>Totals</b>	<b>11,330</b>	<b>0</b>	<b>969</b>	<b>17,204</b>	<b>64,501</b>	<b>0</b>	<b>0</b>	<b>94,004</b>
<u>Steele County, City of BLOOMING PRAIRIE -- ELF ATOCHEM NORTH AMERICA INC. --157 W HWY N --ERCID -- 740140002</u>								
Phosphoric Acid	0	0	0	0	0	6,467	304	6,771
Peracetic Acid	1,877	0	0	0	0	1,811	0	3,688
Formic Acid	515	0	0	0	0	2,678	0	3,193
<b>Totals</b>	<b>2,392</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,956</b>	<b>304</b>	<b>13,652</b>
<u>Steele County, City of BLOOMING PRAIRIE -- TANDEM PRODUCTS, INC. --520 INDUSTRIAL DRV --ERCID -- 740140039</u>								
Manganese	122	0	0	0	916	0	0	1,038
<b>Totals</b>	<b>122</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>916</b>	<b>0</b>	<b>0</b>	<b>1,038</b>
<u>Steele County, City of OWATONNA -- BLOUNT, INC. --CO RD 45 - BOX 568 --ERCID -- 740700124</u>								
Nickel	21	0	0	0	64,174	0	0	64,195



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<u>Swift County, City of BENSON -- CASE TYLER --HWY 12 E --ERCID -- 760150028</u>								
Toluene	11,754	0	3,200	250	0	0	0	15,204
Manganese	151	0	0	0	30,500	0	0	30,651
Xylene (mixed isomers)	14,560	0	3,700	200	0	0	0	18,460
Methyl Isobutyl Ketone	10,121	0	840	0	0	0	0	10,961
<b>Totals</b>	<b>36,586</b>	<b>0</b>	<b>7,740</b>	<b>450</b>	<b>30,500</b>	<b>0</b>	<b>0</b>	<b>75,276</b>
<u>Swift County, City of BENSON -- CHIPPEWA VALLEY ETHANOL CO. --270 20TH ST NW --ERCID -- 760150036</u>								
N-hexane	370	0	0	0	0	0	0	370
Cyclohexane	139	0	0	0	0	0	0	139
<b>Totals</b>	<b>509</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>509</b>
<u>Todd County, City of LONG PRAIRIE -- LONG PRAIRIE PACKING CO. --10 RIVERSIDE DRV --ERCID -- 771240004</u>								
Ammonia	16,190	0	0	0	0	0	0	16,190
<b>Totals</b>	<b>16,190</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,190</b>
<u>Todd County, City of STAPLES -- 3M STAPLES PLANT --1030 N 5TH ST --ERCID -- 771550021</u>								
Copper	5	0	0	0	4,726	0	0	4,731
<b>Totals</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,726</b>	<b>0</b>	<b>0</b>	<b>4,731</b>
<u>Wabasha County, City of LAKE CITY -- FEDERAL-MOGUL POWERTRAIN SYSTEMS --520 N 8TH ST PO BOX 456 --ERCID -- 790670003</u>								
Copper	1,635	0	0	0	0	0	0	1,635
<b>Totals</b>	<b>1,635</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,635</b>
<u>Wabasha County, City of LAKE CITY -- HEAT-N-GLO --800 JEFFERSON --ERCID -- 790670034</u>								
Toluene	100,268	0	0	0	0	0	0	100,268
<b>Totals</b>	<b>100,268</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,268</b>
<u>Wabasha County, City of LAKE CITY -- VALLEY CRAFT, INC. --2001 S HWY 61 --ERCID -- 790670007</u>								
Xylene (mixed isomers)	14,742	0	7,438	0	0	0	0	22,180
Toluene	12,610	0	2,683	0	0	0	0	15,293
<b>Totals</b>	<b>27,352</b>	<b>0</b>	<b>10,121</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37,473</b>
<u>Wadena County, City of MENAUGA -- SALO MANUFACTURING INC. --26 12TH ST SE --ERCID -- 800450007</u>								
Styrene	29,608	0	0	0	0	0	0	29,608
<b>Totals</b>	<b>29,608</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,608</b>
<u>Waseca County, City of WASECA -- BROWN PRINTING CO. --2300 BROWN AVE --ERCID -- 810700008</u>								
Ethylene Glycol	7,900	0	0	0	0	4,000	120	12,020

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
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Glycol Ethers	18,000	0	0	0	0	9,000	270	27,270
<b>Totals</b>	<b>25,900</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,000</b>	<b>390</b>	<b>39,290</b>
<u>Waseca County, City of WASECA -- JOHNSON COMPONENTS INC. --299 JOHNSON AVE SW --ERCID -- 810700040</u>								
Copper	557	0	0	0	147,030	0	0	147,587
<b>Totals</b>	<b>557</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147,030</b>	<b>0</b>	<b>0</b>	<b>147,587</b>
<u>Waseca County, City of WASECA -- U OF MN - SOUTHERN EXPERIMENT STATION --1101 W ELM --ERCID -- 810700010</u>								
Ammonia	46,000	0	0	0	0	0	0	46,000
<b>Totals</b>	<b>46,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,000</b>
<u>Washington County, City of BAYPORT -- ANDERSEN WINDOW CORP. - MAIN FACILITY --100 4TH AVE N --ERCID -- 820150002</u>								
Methyl Isobutyl Ketone	14,799	0	4,559	0	0	1,567	105	21,030
Chromium Compounds	449	0	0	6,576	225	0	0	7,250
Xylene (mixed isomers)	19,973	0	3,090	75	0	778	152	24,068
Glycol Ethers	14,339	0	0	0	0	0	17	14,356
1,2,4-trimethylbenzene	10,371	0	19	433	0	0	38	10,861
<b>Totals</b>	<b>59,931</b>	<b>0</b>	<b>7,668</b>	<b>7,084</b>	<b>225</b>	<b>2,345</b>	<b>312</b>	<b>77,565</b>
<u>Washington County, City of BAYPORT -- NSP - A.S. KING --1103 KING PLANT RD --ERCID -- 820150005</u>								
Sulfuric Acid (aerosol forms only)	46,000	0	0	0	0	22,000	0	68,000
Hydrogen Fluoride	24,000	0	0	0	0	24,000	0	48,000
Manganese Compounds	23,000	0	0	0	0	0	0	23,000
Nickel Compounds	73,000	0	0	0	0	0	0	73,000
Barium Compounds	460,000	0	0	0	0	0	0	460,000
Hydrochloric Acid (aerosol forms only)	9,300	0	0	0	0	37,000	0	46,300
<b>Totals</b>	<b>635,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83,000</b>	<b>0</b>	<b>718,300</b>
<u>Washington County, City of COTTAGE GROVE -- 3M COTTAGE GROVE CENTER --10746 INNOVATION RD --ERCID -- 820300001</u>								
Zinc Compounds	26,881	0	0	0	597	0	0	27,478
Dichlorodifluoromethane	0	0	0	0	0	38,976	0	38,976
Phosphoric Acid	0	0	0	0	0	2,332	638	2,970
Hydrogen Fluoride	7,128	0	0	0	0	453,409	0	460,537
N-hexane	361	4,736	0	0	0	42,627	0	47,724
Manganese Compounds	49,514	0	0	0	755	0	0	50,269

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
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Catechol	2	1,408	0	0	0	12,672	0	14,082
Chromium Compounds	99,996	0	0	0	1,584	0	0	101,580
Copper Compounds	28,852	0	0	0	173,914	0	0	202,766
Ammonia	11,120	0	0	0	0	2,756	0	13,876
Styrene	0	734	163	0	0	6,602	3,488	10,987
2,2-dichloro-1,1,1-trifluoroethane	48,424	0	0	0	0	3,337	0	51,761
Dichlorotetrafluoroethane	0	0	0	0	0	14,645	0	14,645
2-ethoxyethanol	2,734	15,476	73	0	0	139,547	0	157,830
Lead Compounds	59,869	0	0	0	944	0	0	60,813
2-methoxyethanol	0	1,219	0	0	0	10,973	0	12,192
Glycol Ethers	820	28,557	40,618	0	11,660	257,032	30,946	369,633
Ethylene Glycol	173	5,593	0	0	0	52,481	87	58,334
Xylene (mixed isomers)	13,907	374,682	59,609	0	131,822	3,372,986	229	3,953,235
Formic Acid	2,791	133	0	0	0	66,847	0	69,771
Diisocyanates	513	12,355	0	0	0	111,198	24,091	148,157
Methyl Acrylate	3,162	1,265	0	0	0	11,388	0	15,815
Phthalic Anhydride	447	3,225	0	0	0	29,026	0	32,698
Butyl Acrylate	24	206	0	0	0	1,873	0	2,103
Ethylbenzene	1,371	4,726	5,532	0	22,651	42,850	16	77,146
Acrylic Acid	735	9,898	62	0	0	101,580	542	112,817
Acetonitrile	149	2,487	0	0	0	24,321	0	26,957
4,4'-methylenedianiline	0	935	4,548	0	0	8,411	72	13,966
4,4'-isopropylidenediphenol	304	574	0	0	0	5,163	0	6,041
Allyl Chloride	199	0	0	0	0	369	0	568
Hydrochloric Acid (aerosol forms only)	936	0	0	0	0	605,069	0	606,005
Aluminum (fume or dust)	0	0	0	0	0	0	0	0
Triethylamine	2	2,735	0	0	0	24,611	0	27,348
Maleic Anhydride	262	38	14	0	0	346	0	660
Ethyl Acrylate	3,708	301	0	0	0	3,204	147	7,360

Statewide Listing of Amount of Releases, Transfers, and Total Chemicals  
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 Department of Public Safety  
 Emergency Response Commission  
 (Amount in Pounds)

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	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
Methanol	25,809	84,059	242,863	0	31,509	767,957	314	1,152,511
N,n-dimethylformamide	751	4,036	0	0	0	43,427	0	48,214
Methyl Ethyl Ketone	24,335	356,011	86,874	0	696,268	3,360,101	13,721	4,537,310
Formaldehyde	3,065	4,795	185	0	0	110,317	1,951	120,313
Toluene-2,4-diisocyanate	0	1,410	0	0	0	12,688	10,424	24,522
Toluenediisocyanate (mixed isomers)	1,905	82	0	0	0	740	0	2,727
Phenol	4,871	2,170	0	0	0	72,015	13	79,069
Sulfuric Acid (aerosol forms only)	9,105	0	0	0	0	180,809	0	189,914
Nitric Acid	30,920	0	0	0	0	42,206	171	73,297
Methyl Isobutyl Ketone	392	19,269	3,586	0	0	173,421	0	196,668
Ethylene Oxide	0	1,121	0	0	0	10,091	0	11,212
Nitrate Compounds	32,953	0	0	0	0	0	0	32,953
Nickel Compounds	36,880	0	0	0	6,126	0	0	43,006
Toluene	261,706	328,865	9,543	0	23,722	4,486,397	58,028	5,168,261
Methyl Methacrylate	2,706	361	289	0	0	16,741	0	20,097
Dichloromethane	4,866	0	0	0	0	63,311	0	68,177
Cyclohexane	40,758	3,251	445	0	0	267,228	171	311,853
Decabromodiphenyl Oxide	0	385	48	0	0	3,467	0	3,900
Di(2-ethylhexyl) Phthalate	158	2,722	28	0	0	24,499	0	27,407
Trichlorofluoromethane	0	0	0	0	0	14,700	0	14,700
N-butyl Alcohol	241	11,820	0	0	0	106,378	0	118,439
<b>Totals</b>	<b>845,805</b>	<b>1,291,640</b>	<b>454,480</b>	<b>0</b>	<b>1,101,552</b>	<b>15,203,124</b>	<b>145,049</b>	<b>19,041,650</b>
<u>Washington County, City of COTTAGE GROVE -- LSP-COTTAGE GROVE, L.P. --9525 105TH ST CT S --ERCID -- 820300033</u>								
Ammonia	120,000	0	0	0	0	0	0	120,000
<b>Totals</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120,000</b>
<u>Washington County, City of FOREST LAKE -- ROYALINE INDUSTRIES, INC. --794 SW 15TH ST --ERCID -- 820490009</u>								
Styrene	10,000	0	0	0	0	0	0	10,000
<b>Totals</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<u>Washington County, City of OAKDALE -- H.B. FULLER CO. - INDUSTRIAL COATINGS --2900 GRANADA LN --ERCID -- 821360019</u>								
4,4'-isopropylidenediphenol	2,037	0	0	0	0	0	44	2,081

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State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
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Chemical	Quantity Released (8.1)	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
Zinc Compounds	567	0	0	0	0	0	0	567
<b>Totals</b>	<b>2,604</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>2,648</b>
<u>Washington County, City of ST. PAUL PARK -- MARATHON ASHLAND PETROLEUM, LLC --100 W 3RD AVE --ERCID -- 821650001</u>								
Xylene (mixed isomers)	24,506	0	2,567	225,235	2,544	35,569	21,168	311,589
Toluene	22,406	0	6,671	160,327	1,273	51,789	860	243,326
Propylene	22,090	0	92	1,760	0	375	415	24,732
Tetrachloroethylene	3,390	0	0	0	11	0	2	3,403
Biphenyl	144	0	64	1,075	0	59	0	1,342
Cyclohexane	3,682	0	2,686	19,412	0	629	465	26,874
Chlorine	6,202	0	0	0	0	0	0	6,202
N-hexane	15,732	0	1,203	81,969	370	453	22	99,749
Polycyclic Aromatic Compounds	511	0	0	0	0	0	0	511
Ethylbenzene	4,273	0	2,365	37,866	375	5,366	3,100	53,345
Carbon Disulfide	1	0	0	0	0	0	0	1
Ammonia	3,843	0	0	0	0	2,656	0	6,499
Naphthalene	1,291	0	18	9,543	140	3,542	7,929	22,463
Hydrogen Fluoride	91	0	0	0	0	205,255	0	205,346
Ethylene	11,056	0	18	1,801	0	375	200	13,450
Styrene	1,644	0	0	2	0	8	21,420	23,074
Carbonyl Sulfide	3	0	0	0	0	0	0	3
Molybdenum Trioxide	0	0	0	0	0	0	0	0
1,3-butadiene	668	0	0	2	0	203	0	873
Benzene	9,764	0	682	37,628	243	29,173	24	77,514
1,2,4-trimethylbenzene	10,229	0	3,725	102,152	1,446	10,258	17,235	145,045
<b>Totals</b>	<b>141,526</b>	<b>0</b>	<b>20,091</b>	<b>678,772</b>	<b>6,402</b>	<b>345,710</b>	<b>72,840</b>	<b>1,265,341</b>
<u>Washington County, City of STILLWATER -- 3M-STILLWATER --1987 INDUSTRIAL BLVD --ERCID -- 821700005</u>								
N-methyl-2-pyrrolidone	14,309	0	92	0	0	0	655	15,056
Glycol Ethers	13,768	0	767	0	0	0	5,427	19,962
Diisocyanates (includes only 20 chemicals)	1,710	0	24	0	0	0	168	1,902
Xylene (mixed isomers)	55,576	0	256	0	0	0	1,816	57,648

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<b>Totals</b>	<b>85,363</b>	<b>0</b>	<b>1,139</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,066</b>	<b>94,568</b>
<u>Washington County, City of WOODBURY -- ECOWATER SYSTEMS, INC. --1890 WOODLANE DRV --ERCID -- 821910002</u>								
Styrene	5,400	0	0	0	0	500	0	5,900
<b>Totals</b>	<b>5,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>0</b>	<b>5,900</b>
<u>Washington County, City of WOODBURY -- LAND O'LAKES - FLUID DAIRY DIV. --1930 WOODDALE DRV --ERCID -- 821910001</u>								
Phosphoric Acid	0	0	0	0	0	15,331	0	15,331
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,331</b>	<b>0</b>	<b>15,331</b>
<u>Watsonwan County, City of ST. JAMES -- WESTIN AUTOMOTIVE PRODUCTS, INC. --240 S 15TH ST --ERCID -- 830900001</u>								
Nickel	48	0	0	0	5,103	0	0	5,151
<b>Totals</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,103</b>	<b>0</b>	<b>0</b>	<b>5,151</b>
<u>Winona County, City of LEWISTON -- RIVERSIDE ELECTRONICS LTD. --1 RIVERSIDE DRV --ERCID -- 850550016</u>								
Lead	0	0	0	0	4,468	0	0	4,468
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,468</b>	<b>0</b>	<b>0</b>	<b>4,468</b>
<u>Winona County, City of WINONA -- BADGER EQUIPMENT CO. --217 PATNEAUDE DRIVE --ERCID -- 851450037</u>								
Manganese	0	0	0	0	64,862	0	0	64,862
Nickel	0	0	0	0	37,977	0	0	37,977
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102,839</b>	<b>0</b>	<b>0</b>	<b>102,839</b>
<u>Winona County, City of WINONA -- BADGER FOUNDRY CO. --1058 E MARK ST PO BOX 1306 --ERCID -- 851450005</u>								
Phenol	1,390	0	0	0	140	0	0	1,530
Naphthalene	7,600	0	0	0	1,580	0	0	9,180
Manganese	57,060	0	0	7,330	70	0	0	64,460
<b>Totals</b>	<b>66,050</b>	<b>0</b>	<b>0</b>	<b>7,330</b>	<b>1,790</b>	<b>0</b>	<b>0</b>	<b>75,170</b>
<u>Winona County, City of WINONA -- BEHRENS INC --471 W 3RD ST --ERCID -- 851450092</u>								
Zinc Compounds	0	0	0	0	50,000	0	0	50,000
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>0</b>	<b>50,000</b>
<u>Winona County, City of WINONA -- CYTEC FIBERITE, INC. --501 W 3RD ST --ERCID -- 851450010</u>								
Phenol	16,279	127,060	38,028	0	0	0	0	181,367
Methanol	59,170	208,560	66,951	10,000	0	0	0	344,681
Methyl Ethyl Ketone	16,251	158,620	43,791	0	0	0	0	218,662
Formaldehyde	3,513	36,280	10,066	0	0	0	0	49,859
<b>Totals</b>	<b>95,213</b>	<b>530,520</b>	<b>158,836</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>794,569</b>

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<u>Winona County, City of WINONA -- MILLER WASTE MILLS, INC. - RTP --580 E FRONT ST --ERCID -- 851450019</u>								
Antimony Compounds	1,006	0	0	0	0	0	0	1,006
Zinc Compounds	271	0	0	0	0	0	0	271
Decabromodiphenyl Oxide	3,429	0	0	0	0	0	0	3,429
<b>Totals</b>	<b>4,706</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,706</b>
<u>Winona County, City of WINONA -- PEERLESS CHAIN CO. --1416 E SANBORN ST --ERCID -- 851450002</u>								
Zinc Compounds	17,605	0	0	0	0	0	0	17,605
<b>Totals</b>	<b>17,605</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17,605</b>
<u>Winona County, City of WINONA -- WE-NO-NAH CANOE --1252 BUNDY BLVD --ERCID -- 851450071</u>								
Styrene	8,322	0	0	0	0	0	0	8,322
<b>Totals</b>	<b>8,322</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,322</b>
<u>Wright County, City of BUFFALO -- ALLIEDSIGNAL INC. --200 CENTENNIAL DRV --ERCID -- 860190025</u>								
Copper	190	0	0	0	64,535	0	0	64,725
Nitric Acid	80	0	0	0	0	5,300	11,424	16,804
<b>Totals</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64,535</b>	<b>5,300</b>	<b>11,424</b>	<b>81,529</b>
<u>Wright County, City of HOWARD LAKE -- DURA SUPREME, INC. --300 DURA DRV --ERCID -- 860850007</u>								
Xylene (mixed isomers)	23,738	0	1,753	0	0	0	10	25,501
<b>Totals</b>	<b>23,738</b>	<b>0</b>	<b>1,753</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>25,501</b>
<u>Wright County, City of MAPLE LAKE -- SUN PATIO INC. --400 HWY 55 --ERCID -- 860890008</u>								
Styrene	18,945	0	0	0	0	0	0	18,945
<b>Totals</b>	<b>18,945</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,945</b>
<u>Wright County, City of MONTICELLO -- SUNNY FRESH FOODS --206 W 4TH ST --ERCID -- 861090004</u>								
Nitric Acid	0	0	0	0	0	12,907	0	12,907
Phosphoric Acid	0	0	0	0	0	10,148	0	10,148
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,055</b>	<b>0</b>	<b>23,055</b>
<u>Wright County, City of MONTROSE -- KNIGHT COLORS &amp; CHEMICALS CO. --2515 US HWY 12 SW --ERCID -- 861200005</u>								
N-hexane	10,000	0	0	0	0	0	0	10,000
<b>Totals</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<b>Grand Totals:</b>	32,228,613	7,034,602	2,297,718	185,944,188	23,041,958	37,316,963	10,357,140	298,221,182





Statewide Listing of Federal TRI Expansion Facilities by Amount of Releases, Transfers and Total Chemicals Managed for the Calendar Year 1998

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<b><u>Otter Tail County, City of FERGUS FALLS -- OTTER TAIL POWER CO. (HOOT LAKE) -- 1012 WATER PLANT ROAD -- ERCID -- 561650012</u></b>								
Barium Compounds	110,000	0	0	0	0	0	0	110,000
Hydrochloric Acid (aerosol forms only)	8,300	0	0	0	0	32,000	0	40,300
<b>Totals</b>	<b>118,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32,000</b>	<b>0</b>	<b>150,300</b>
<b><u>Ramsey County, City of ROSEVILLE -- BP AMOCO OIL / TWIN CITIES TERMINAL -- 2288 W CO RD C -- ERCID -- 620600002</u></b>								
Toluene	250	0	0	500	37	0	0	787
Ethylbenzene	26	0	0	53	6	0	0	85
N-hexane	242	0	0	69	9	0	0	320
Benzene	180	0	0	93	11	0	0	284
Xylene (mixed isomers)	130	0	0	37	31	0	0	198
1,2,4-trimethylbenzene	28	0	0	180	8	0	0	216
<b>Totals</b>	<b>856</b>	<b>0</b>	<b>0</b>	<b>932</b>	<b>102</b>	<b>0</b>	<b>0</b>	<b>1,890</b>
<b><u>Ramsey County, City of ROSEVILLE -- MILSOLV CORPORATION -- 2340 ROSE PLACE -- ERCID -- 620600003</u></b>								
Methyl Ethyl Ketone	663	0	0	0	997	0	0	1,660
N-hexane	667	0	0	0	0	0	0	667
Toluene	278	0	0	0	3,611	0	0	3,889
Xylene (mixed isomers)	81	0	0	0	1,543	0	0	1,624
Methanol	1,627	0	0	0	2,954	0	0	4,581
Methyl Isobutyl Ketone	38	0	0	0	991	0	0	1,029
<b>Totals</b>	<b>3,354</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,096</b>	<b>0</b>	<b>0</b>	<b>13,450</b>
<b><u>Ramsey County, City of ROSEVILLE -- U.S. FILTER RECOVERY SERVICES INC. -- 2430 ROSE PLACE -- ERCID -- 620600023</u></b>								
Chlorine	255	0	0	0	0	58,500	0	58,755
Ammonia	84	0	0	1,306,381	0	0	11,698	1,318,163
Copper	249	0	0	2,708,008	522,000	0	0	3,230,257
Zinc Compounds	159	0	0	0	384,000	0	0	384,159
Phosphoric Acid	0	0	0	0	0	20,043	0	20,043
Chromium	65	0	0	0	80,600	0	0	80,665
Nickel	154	0	0	16,600	70,400	0	0	87,154
<b>Totals</b>	<b>966</b>	<b>0</b>	<b>0</b>	<b>4,030,989</b>	<b>1,057,000</b>	<b>78,543</b>	<b>11,698</b>	<b>5,179,196</b>
<b><u>Ramsey County, City of ST. PAUL -- NSP - HIGH BRIDGE PLANT -- 501 SHEPARD RD -- ERCID -- 620700031</u></b>								
Hydrogen Fluoride	22,000	0	0	0	0	22,000	0	44,000
Hydrochloric Acid (aerosol forms only)	6,800	0	0	0	0	27,000	0	33,800
Barium Compounds	150,000	0	0	0	0	0	0	150,000
<b>Totals</b>	<b>178,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49,000</b>	<b>0</b>	<b>227,800</b>
<b><u>Ramsey County, City of ST. PAUL -- HARCROS CHEMICALS -- 584 N FAIRVIEW AVE -- ERCID -- 620700070</u></b>								
Phosphoric Acid	40	0	0	0	0	480	250	770

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<b>Totals</b>	<b>40</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>480</b>	<b>250</b>	<b>770</b>
<b><u>Ramsey County, City of ST. PAUL -- ASHLAND CHEMICAL CO. -- 395 JAMES AVE -- ERCID -- 620700077</u></b>								
N-hexane	1,000	0	1,482	0	0	0	0	2,482
Toluene	1,090	0	8,540	0	0	0	0	9,630
1,2,4-trimethylbenzene	40	0	679	0	0	0	0	719
Methyl Ethyl Ketone	550	0	1,975	0	0	0	0	2,525
Glycol Ethers	500	0	2,861	0	0	0	0	3,361
Xylene (mixed isomers)	570	0	7,920	0	0	0	0	8,490
Methanol	880	0	4,840	0	0	0	0	5,720
Methyl Isobutyl Ketone	214	0	495	0	0	0	0	709
<b>Totals</b>	<b>4,844</b>	<b>0</b>	<b>28,792</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33,636</b>
<b><u>Ramsey County, City of ST. PAUL -- VAN WATERS &amp; ROGERS, INC. -- 845 TERRACE CT -- ERCID -- 620700079</u></b>								
N,n-dimethylformamide	12	0	0	0	91	0	805	908
Nitric Acid	33	0	0	0	0	3,800	0	3,833
<b>Totals</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>3,800</b>	<b>805</b>	<b>4,741</b>
<b><u>Ramsey County, City of ST. PAUL -- WORUM CHEMICAL AND FIBERGLASS -- 2130 ENERGY PARK DRV -- ERCID -- 620700082</u></b>								
Xylene (mixed isomers)	226	0	18,556	0	0	0	0	18,782
Toluene-2,4-diisocyanate	0	0	0	0	0	0	0	0
Styrene	37	0	0	0	0	0	0	37
Toluene	4,092	0	39,688	0	0	0	0	43,780
Methanol	575	0	2,538	0	0	0	0	3,113
Methyl Ethyl Ketone	861	0	11,139	0	0	0	0	12,000
<b>Totals</b>	<b>5,791</b>	<b>0</b>	<b>71,921</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>77,712</b>
<b><u>St Louis County, City of AURORA -- LASKIN ENERGY CENTER - MN POWER -- 5699 COLBY LAKE RD -- ERCID -- 690350001</u></b>								
Barium Compounds	140,000	0	0	0	0	0	0	140,000
<b>Totals</b>	<b>140,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140,000</b>
<b><u>Sherburne County, City of BECKER -- NSP - SHERCO PLANT -- 13999 INDUSTRIAL BLVD -- ERCID -- 710090001</u></b>								
Manganese Compounds	620,000	0	0	0	0	0	0	620,000
Antimony Compounds	4,300	0	0	0	0	0	0	4,300
Hydrogen Fluoride	17,000	0	0	0	0	280,000	0	297,000
Barium Compounds	5,600,000	0	0	0	0	0	0	5,600,000
Chromium Compounds	68,000	0	0	0	0	0	0	68,000
Lead Compounds	47,000	0	0	0	0	0	0	47,000
Molybdenum Trioxide	20,000	0	0	0	0	0	0	20,000
Nickel Compounds	55,000	0	0	0	0	0	0	55,000
Sulfuric Acid (aerosol forms only)	28,000	0	0	0	0	96,000	0	124,000

Statewide Listing of Federal TRI Expansion Facilities by Amount of Releases, Transfers and Total Chemicals Managed for the Calendar Year 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	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
Zinc Compounds	87,000	0	0	0	0	0	0	87,000
Ammonia	27,000	0	0	0	0	3,100	0	30,100
Copper Compounds	130,000	0	0	0	0	0	0	130,000
Hydrochloric Acid (aerosol forms only)	6,400	0	0	0	0	210,000	0	216,400
<b>Totals</b>	<b>6,709,700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>589,100</b>	<b>0</b>	<b>7,298,800</b>
<b><u>Sherburne County, City of BECKER -- BECKER RDF ASH LANDFILL -- 13700 SHERBURNE AVE S -- ERCID -- 710090018</u></b>								
Copper Compounds	130,000	0	0	0	0	0	0	130,000
Chromium Compounds	12,000	0	0	0	0	0	0	12,000
Lead Compounds	140,000	0	0	0	0	0	0	140,000
Manganese Compounds	10,000	0	0	0	0	0	0	10,000
Nickel Compounds	13,000	0	0	0	0	0	0	13,000
Ammonia	51	0	0	0	0	0	0	51
Barium Compounds	67,000	0	0	0	0	0	0	67,000
Antimony Compounds	18,000	0	0	0	0	0	0	18,000
Zinc Compounds	350,000	0	0	0	0	0	0	350,000
Molybdenum Trioxide	3,900	0	0	0	0	0	0	3,900
<b>Totals</b>	<b>743,951</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>743,951</b>
<b><u>Washington County, City of BAYPORT -- NSP - A.S. KING -- 1103 KING PLANT RD -- ERCID -- 820150005</u></b>								
Sulfuric Acid (aerosol forms only)	46,000	0	0	0	0	22,000	0	68,000
Nickel Compounds	73,000	0	0	0	0	0	0	73,000
Manganese Compounds	23,000	0	0	0	0	0	0	23,000
Hydrogen Fluoride	24,000	0	0	0	0	24,000	0	48,000
Barium Compounds	460,000	0	0	0	0	0	0	460,000
Hydrochloric Acid (aerosol forms only)	9,300	0	0	0	0	37,000	0	46,300
<b>Totals</b>	<b>635,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83,000</b>	<b>0</b>	<b>718,300</b>
<b><u>Washington County, City of COTTAGE GROVE -- LSP-COTTAGE GROVE, L.P. -- 9525 105TH ST CT S -- ERCID -- 820300033</u></b>								
Ammonia	120,000	0	0	0	0	0	0	120,000
<b>Totals</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120,000</b>
<b>Grand Totals</b>	<b>11,627,246</b>	<b>0</b>	<b>105,123</b>	<b>4,031,921</b>	<b>1,162,699</b>	<b>1,539,758</b>	<b>13,323</b>	<b>18,480,070</b>

Attachment 5: Statewide Listing of State TRI Expansion Facilities by Amount of Releases, State of Minnesota  
Transfers and Total Chemicals Managed for the Calendar Year 1998

Department of Public Safety  
Emergency Response Commission  
(Amount in Pounds)

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

Sorted by County, City, Facility

Chemical	Quantity Released (8.1)	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
<b><u>Dakota County, City of ROSEMOUNT -- U OF MN - ROSEMOUNT RESEARCH CENTER -- 15325 BABCOCK AVE -- ERCID -- 191450017</u></b>								
Ammonia	170,748	0	0	0	0	0	0	170,748
<b>Totals</b>	<b>170,748</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>170,748</b>
<b><u>Hennepin County, City of ST. PAUL -- NORTHWEST AIRLINES, INC. -- 5101 NORTHWEST DRIVE -- ERCID -- 279990003</u></b>								
Methyl Ethyl Ketone	8,800	0	2,200	0	900	0	710	12,610
Trichloroethylene	57,700	0	0	0	0	0	610	58,310
<b>Totals</b>	<b>66,500</b>	<b>0</b>	<b>2,200</b>	<b>0</b>	<b>900</b>	<b>0</b>	<b>1,320</b>	<b>70,920</b>
<b><u>Polk County, City of CROOKSTON -- U OF MN - NORTHWEST EXPERIMENT STATION -- 302 SELVIA HALL -- ERCID -- 600650018</u></b>								
Ammonia	28,592	0	0	0	0	0	0	28,592
<b>Totals</b>	<b>28,592</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,592</b>
<b><u>Redwood County, City of LAMBERTON -- U OF MN - SOUTHWEST EXPERIMENT STATION -- HWY 330 -- ERCID -- 640590003</u></b>								
Ammonia	51,420	0	0	0	0	0	0	51,420
<b>Totals</b>	<b>51,420</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>51,420</b>
<b><u>Redwood County, City of REDWOOD FALLS -- U OF MN - SANDERS CROP MGMT. CTR. -- 112N 36W REDWOOD-PARTS OF SEC. 22 &amp;23 --</u></b>								
Ammonia	52,893	0	0	0	0	0	0	52,893
<b>Totals</b>	<b>52,893</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52,893</b>
<b><u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. -- 112N 35W PAXTON-S 1/2 SEC. OF 31 -- ERCID -- 64</u></b>								
Ammonia	33,945	0	0	0	0	0	0	33,945
<b>Totals</b>	<b>33,945</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33,945</b>
<b><u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. -- 112N 35W PAXTON-NE 1/4 SEC. OF 21 -- ERCID --</u></b>								
Ammonia	9,388	0	0	0	0	0	0	9,388
<b>Totals</b>	<b>9,388</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,388</b>
<b><u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. -- 112N 35W PAXTON-SE 1/4 SEC. OF 19 -- ERCID --</u></b>								
Ammonia	28,182	0	0	0	0	0	0	28,182
<b>Totals</b>	<b>28,182</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28,182</b>
<b><u>Redwood County, City of REDWOOD FALLS -- U OF MN-SANDERS CROP MGMT. CTR. -- 112N 36W REDWOOD-PT. OF SEC. 25,26,35,36 -- E</u></b>								
Ammonia	54,320	0	0	0	0	0	0	54,320
<b>Totals</b>	<b>54,320</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54,320</b>
<b><u>Waseca County, City of WASECA -- U OF MN - SOUTHERN EXPERIMENT STATION -- 1101 W ELM -- ERCID -- 810700010</u></b>								
Ammonia	46,000	0	0	0	0	0	0	46,000
<b>Totals</b>	<b>46,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,000</b>
<b>Grand Totals</b>	<b>541,988</b>	<b>0</b>	<b>2,200</b>	<b>0</b>	<b>900</b>	<b>0</b>	<b>1,320</b>	<b>546,408</b>

**Attachment 6: Number of Facilities (by County) Reporting Releases  
and Transfers for the Calendar Year 1998**  
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**  
**Emergency Response Commission**

(Amount in Pounds)

<b>County</b>	<b>Number of Facilities</b>	<b>Environmental Releases (8.1)</b>	<b>Off-site Releases and Transfers (8.1,3,5,7)</b>	<b>Total Chemicals Managed (8.1,2,3,4,5,6,7)</b>
Anoka	29	530,363	1,425,075	2,016,735
Beltrami	2	123,455	123,455	123,455
Benton	4	101,027	111,097	426,346
Blue Earth	6	1,319,065	1,377,559	1,415,210
Brown	4	67,289	302,875	395,241
Carlton	3	386,338	4,881,069	5,944,090
Carver	12	285,288	523,580	553,371
Cass	1	4,030	4,030	4,030
Chippewa	1	60	46,329	46,329
Chisago	1	30,661	30,661	30,661
Clay	2	182,690	182,690	654,225
Crow Wing	5	4,675	83,673	117,356
Dakota	23	2,584,688	2,851,416	168,781,396
Dodge	1	154,311	417,011	417,011
Douglas	2	82,261	95,565	116,346
Faribault	3	13,365	13,365	13,365
Fillmore	1	62,520	82,680	82,680
Freeborn	4	108,312	229,766	307,814
Goodhue	11	858,558	972,255	1,663,841
Grant	1	14,209	15,128	15,128
Hennepin	88	2,120,707	9,379,849	11,429,661
Houston	1	17,000	21,350	21,350
Hubbard	1	146,406	146,406	146,406
Isanti	1	45	200,345	200,345
Itasca	3	1,870,937	1,893,733	2,179,540
Jackson	1	8,500	110,200	110,200
Kanabec	2	73,507	81,823	81,823
Kandiyohi	1	11,280	19,532	19,532
Koochiching	2	624,079	624,079	8,322,079
Lac Qui Parle	2	220,000	220,090	489,356
Lake	2	55,700	108,363	108,363
Lake of the Woods	1	47,295	49,738	49,738
Le Sueur	4	11,425	190,105	747,582
Lyon	2	123,591	134,764	159,455
Marshall	1	103,196	103,196	103,196
Martin	4	356,956	408,410	408,410
McLeod	5	583,774	2,432,879	21,221,896
Meeker	4	42,240	46,123	46,152
Mille Lacs	2	15,886	42,794	42,794
Morrison	1	357,058	357,058	357,058

**Number of Facilities (by County) Reporting Releases  
and Transfers for the Calendar Year 1998**  
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  
Emergency Response Commission**

**(Amount in Pounds)**

<b>County</b>	<b>Number of Facilities</b>	<b>Environmental Releases (8.1)</b>	<b>Off-site Releases and Transfers (8.1,3,5,7)</b>	<b>Total Chemicals Managed (8.1,2,3,4,5,6,7)</b>
MOWER	2	169,100	194,447	322,447
Nicollet	2	33,383	39,019	41,019
Nobles	1	8,058	64,980	92,850
Olmsted	10	783,485	1,972,755	2,896,398
Otter Tail	6	195,029	287,359	843,655
Pennington	1	91,000	91,700	91,700
Pipestone	1	232,474	232,474	232,474
Polk	4	752,412	761,211	814,557
Ramsey	52	3,590,903	14,168,923	21,775,875
Redwood	6	230,148	230,148	230,148
Renville	1	136,790	136,790	136,790
Rice	5	213,487	1,994,123	3,235,914
Rock	1	28,000	28,000	28,000
Roseau	1	80,200	92,460	92,460
Scott	7	126,676	1,007,337	1,455,511
Sherburne	4	7,977,983	8,177,189	8,766,289
Sibley	1	0	0	50,225
St Louis	12	449,324	728,491	1,084,908
Stearns	12	579,516	1,797,241	2,810,066
Steele	10	412,462	726,097	778,600
Swift	2	37,095	75,335	75,785
Todd	2	16,195	20,921	20,921
Wabasha	3	129,255	139,376	139,376
Wadena	1	29,608	29,608	29,608
Waseca	3	72,457	219,877	232,877
Washington	10	1,905,929	3,723,797	21,351,303
Watonwan	1	48	5,151	5,151
Winona	8	191,896	509,829	1,057,679
Wright	5	52,953	130,675	159,030
<b>Totals:</b>	<b>418</b>	<b>32,228,613</b>	<b>67,925,429</b>	<b>298,221,182</b>

## Attachment 7

### **Facilities Filing a Certification Statement (Alternate Threshold Option) instead of an EPA Form R**

Starting with the 1995 reporting year, the 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 Emergency Response Commission 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 Pollution Prevention fees.

In 1998, 139 facilities filed 273 Certification Statements including 57 who filed both a Form R and Certification Statement(s), and 82 who filed only a Certification Statement(s).

The following facilities filed a Certification Statement(s) for the 1998 reporting year:

<u>FACILITY NAME</u>	<u>ERC ID NUMBER</u>	<u>CHEMICAL NAME</u>
Federal-Cartridge Co.	02-005-0004	Nitroglycerin Nitric Acid Antimony Compounds
Airgas , North Central, Inc.	02-005-0029	Propylene
Hoffman Enclosures, Inc.	02-005-0053	Phosphoric Acid
PDI, Inc.	02-020-0005	Xylene (Mixed Isomers)
Onan Mfg.	02-055-0009	Ethylene Glycol
H.B. Fuller Co.	02-055-0018	Zinc Compounds

Land O' Lakes - Detroit Lakes	03-055-0001	Copper Compounds Zinc Compounds Manganese Compounds
Land O' Lakes Wood Preserving	04-215-0001	Copper Compounds Arsenic Compounds Chromium Compounds
Champion International Corp.	05-072-0001	Phosphoric Acid
Gold' N Plump Farms LP, LLP	05-073-0015	Copper Compounds Zinc Compounds Manganese Compounds
Cenex Harvest States Coop	07-100-0005	Phosphoric Acid
Hubbard Feeds Inc.	07-100-0006	Zinc Compounds Manganese Compounds Copper Compounds
Farmland Feed Mill	07-100-0049	Zinc Compounds
Feed Service Co., Inc.	07-100-0057	Zinc Compounds
Big Gain Inc.	07-160-0004	Zinc Compounds Manganese Compounds Copper Compounds
Del Monte Foods, Plant #114	08-100-0003	Phosphoric Acid
Ochs Brick Co.	08-105-0002	Manganese Compounds Barium Compounds
Specialty Minerals, Inc.	09-040-0019	Acid (Trade Secret)
Softsoap Enterprises, Inc.	10-035-0003	Diethanolamine
McLaughlin Gormley King	10-035-0008	Permethrin Piperonyl Butoxide Maleic Anhydride Phenothrin Tetramethrin Dicyclopentadiene Dipropyl Isocinchomeronate
Plastech Corp., Inc.	13-065-0007	Lead
Ethanol 2000, LLP	17-020-0002	Ammonia Benzene Cyclohexane n-Hexane
Bottling Group, L.L.C. The Pepsi Bottling Group	19-006-0005	Phosphoric Acid

Water Heater Innovations, Inc.	19-025-0027	Diisocyanates
Materials Processing Corporation	19-025-0091	Copper
W.R. Grace & Co.	19-025-0095	Nitrate Compounds
ConAgra Flour Milling Co.	19-060-0001	Chlorine
Intek Plastics, Inc.	19-060-0043	Diisocyanates
Land O' Lakes - Inver Grove Hts.	19-071-0001	Copper Compounds Manganese Compounds Zinc Compounds
Cenex, Inc. - Lubricants Plant	19-071-0004	Zinc Compounds
ChemCentral/Minnesota	19-080-0001	Styrene Ethylene Glycol Methanol Di(2-ethylhexyl) Phthalate (DEHP) Methyl Isobutyl Ketone n-Butyl Alcohol n-Hexane Dichloromethane Dibutyl Phthalate
Koch Petroleum Group	19-145-0005	Lead Compounds 1,2-Dibromoethane Molybdenum Trioxide Polycyclic Aromatic Compounds Glycol Ethers
Koch Sulfur Products Co.	19-145-0006	Ethylbenzene Naphthalene Nickel Compounds
Dole Explosives, Inc.	19-145-0014	Ammonia Nitrate Compounds
Flint Ink Corporation	19-180-0001	Toluene Barium Compounds
Al Corn Clean Fuel	20-014-0016	Ammonia Benzene Cyclohexane n-Hexane
Hubbard Feeds, Inc.	21-005-0002	Zinc Compounds
Corn Plus	22-110-0019	Benzene

Pro-Corn	23-134-0019	Ammonia Benzene Cyclohexane n-Hexane
Schweigert Foods	24-005-0001	Phosphoric Acid
Airgas North Central, Inc.	24-005-0040	Propylene
Armour-Freeborn Foods Co.	24-005-0072	Nitric Acid
Red Wing Shoe Co., Inc. Plant II	25-110-0001	Diisocyanates
Red Wing Shoe Co., Inc. Plant I	25-110-0008	Diisocyanates
ChemRex, Inc.	27-005-0008	Diisocyanates Xylene Ethylbenzene Toluene Diisocyanate
Hitchcock Industries, Inc.	27-005-0013	Diisocyanates
FMS Corporation	27-005-0092	Ammonia Tetrachloroethylene
Caterpillar Paving Products , Inc.	27-015-0053	Ethylene Glycol
Birchwood Laboratories, Inc.	27-056-0001	Phosphoric Acid Barium Compounds
Douglas Corp.	27-056-0076	Diisocyanates
Reliance Motion Control	27-056-0081	Diisocyanates
Filmtec Corporation	27-060-0002	Diisocyanates
Honeywell, Inc.	27-070-0001	Diisocyanates
Electrochemicals , Inc.	27-120-0010	Ethylene Glycol Formaldehyde Glycol Ethers
Bureau of Engraving, Inc. Electronics Group	27-135-0011	Chlorine
Purina Mills, Inc.	27-135-0062	Copper Compounds Manganese Compounds Zinc Compounds
Davis-Frost, Inc.	27-135-0098	Zinc Compounds

		Barium Compounds
A & L Laboratories, Inc.	27-135-0156	Nitric Acid Phosphoric Acid
Smith Foundry Co.	27-135-0157	Alumina Oxide
Kohl & Madden Printing Ink Corp.	27-135-0222	Barium Compounds
Hiawatha Metalcraft, Inc. - Building 2	27-135-0277	Chromium Compounds
Hauenstein & Burmeister	27-135-0281	Nickel Manganese Zinc (Fume or dust) Chromium
Sierra Corp./TK Products	27-140-0007	Cumene
AlliedSignal, Inc.	27-140-0008	Hydrochloric Acid (aerosol) Sulfuric Acid (aerosol)
Ceram-Traz Corporation	27-175-0002	Diethanolamine
Foam Enterprises, Inc.	27-180-0069	Diisocyanates Chlorodifluoromethane Dichlorodifluoromethane Trichlorofluoromethane 1,1-Dichloro-1-fluoroethane
Hutchinson Technology, Inc.	27-180-0078	Ammonia
AlliedSignal, Inc.	27-215-0003	Chlorine
Hardcoat, Inc.	27-215-0038	Nitric Acid
Lamb-Weston/RDO Frozen	29-120-0003	Chlorine
Boswell Energy Center	31-068-0001	Chlorine
Blandin Paper Company	31-110-0004	Phosphoric Acid
Jennie-O Foods, Inc.	34-010-0002	Formaldehyde
Jennie-O Foods, Inc.	34-175-0005	Phosphoric Acid
Ducoa L.P.	34-175-0007	Zinc Compounds Copper Compounds Manganese Compounds
Jennie-O Foods, Inc.	34-175-0008	Phosphoric Acid

Willmar Poultry Farms, Inc.	34-175-0079	Formaldehyde
Page & Hill Forest Products, Inc.	36-005-0001	Copper Pentachlorophenol
Land O' Lakes - Dawson	37-045-0001	Copper Compounds Manganese Compounds Zinc Compounds
Ag Processing, Inc.	37-045-0012	Chlorine
Doane Pet Care Co.	40-070-0001	Phosphoric Acid
Koch Materials Co.	42-095-0003	1,2,4 -Trimethylbenzene Xylene Ethylbenzene Toluene
Heartland Foods Co.	42-095-0007	Phosphoric Acid
Minnesota Corn Processors	42-095-0048	Benzene Xylene Cyclohexane Toluene Chlorine
Consolidated Nutrition, L.C.	43-030-0017	Zinc Compounds
Polyfoam, Inc.	43-065-0002	Sulfuric Acid (Aerosol)
First District Association	47-100-0001	Nitric Acid Phosphoric Acid
Anderson Chemical Company	47-100-0005	Phosphoric Acid
Hormel Foods Corporation	50-015-0002	Phosphoric Acid Sodium Nitrite Chlorine
Wis -Pak of Mankato, Inc.	52-065-0003	Sulfuric Acid (Aerosol) Phosphoric Acid
Alumacraft Boat Co.	52-080-0001	Diisocyanates
Continental Grain, Inc. Wayne Feed Division	53-150-0007	Manganese Compounds Zinc Compounds Copper Compounds
Hubbard Milling Company	53-150-0043	Copper Compounds Manganese Compounds Zinc Compounds
Quest International	55-095-0017	Nitric Acid

		Ammonia
Lund Boat Company	56-251-0003	Diisocyanates
JOWCT, Inc.	56-315-0011	Phosphoric Acid
Arctic Cat, Inc.	57-115-0042	Diisocyanates Ethylene Glycol
Bell Lumber & Pole Co.	62-045-0001	Pentachlorophenol
AlliedSignal, Inc.	62-060-0001	Hydrochloric Acid (aerosol) Sulfuric Acid (aerosol)
Milsolv Minnesota Corp.	62-060-0003	1,2,4 -Trimethylbenzene Glycol Ethers n-Butyl Alcohol n-Hexane 2-Ethoxyethanol Dichloromethane Ethylbenzene
Buckbee-Mears St. Paul	62-070-0009	Chlorine
C&H Enterprises, Inc.	62-070-0010	Glycol Ethers Sodium Nitrite Nitric Acid Methylene Chloride
Century Circuits & Electronics	62-070-0011	Chlorine
Ford Motor Company Twin Cities Assembly Plant	62-070-0020	Benzene Cyclohexane n-Hexane
Harcros Chemicals, Inc.	62-070-0070	Glycol Ethers Ethylene Glycol
Ashland Chemical Company	62-070-0077	1,2,4 - Trimethylbenzene Cyclohexane Ethylene Glycol n-Butyl Alcohol Cumene Di(2-Ethylhexyl) Phthalate Styrene Trichloroethylene
Van Waters & Rogers, Inc.	62-070-0079	Xylene Toluene Methanol Tetrachloroethylene Methyl Ethyl Ketone Ethylene Glycol Phosphoric Acid

		Glycol Ethers Ammonia
HCI Worum Chemical Company	62-070-0082	Toluene-2,6-Diisocyanate n-Butyl Alcohol Glycol Ethers 1,1-Dichloro-1-Fluoroethane Ethylene Glycol Methyl Isobutyl Ketone 1,2,4-Trimethylbenzene Ethylbenzene n-Hexane Naphthalene Dichloromethane Trichloroethylene 1,1,1-Trichloroethane Tetrachloroethylene Diethanolamine N-Methyl-2-pyrrolidone Dimethyl Phthalate Cumene 4,4' -Isopropylidenediphenol Zinc Compounds Benzoyl peroxide 2,2-Dichloro-1,1,1-Trifluoroethane
Versa Iron & Machine	62-070-0230	Copper Compounds Manganese Compounds
Quality Wood Treating Co., Inc.	62-095-0001	Copper Compounds Arsenic Compounds Chromium Compounds
Central Biproducts	64-110-0002	Chlorine
Artesyn Technologies	64-110-0012	Diisocyanates
Agri-Energy, LLC	67-055-0022	Ammonia Benzene Cyclohexane n-Hexane
Polaris Industries, Inc.	68-155-0001	Ethylene Glycol
Minnesota Explosives Co.	69-058-0002	Nitric Acid
Duluth Brass & Aluminum Co.	69-125-0086	Copper
North Star Steel Minnesota Duluth Division	69-125-0087	Nickel Compounds Chromium Compounds
ITW Irathane Systems	69-235-0007	Diisocyanates
Viking Explosives & Supply Inc.	69-235-0029	Ammonia

		Nitrate Compounds
Chaska Chemical Co., Inc.	70-082-0002	Nitric Acid Phosphoric Acid
Ashland Distribution Co.	70-085-0003	Ethylene Glycol
Conklin Company, Inc.	70-085-0006	Phosphoric Acid Ammonia Zinc Compounds
Fremont Industries, Inc.	70-085-0008	Sodium Nitrite Glycol Ethers Toluene Methyl Ethyl Ketone Ethylene Glycol N-Methyl-2-Pyrrolidone
Heartland Corn Products	72-120-0010	Ammonia Benzene Cyclohexane n-Hexane
Jennie-O Foods, Inc.	73-150-0001	Phosphoric Acid
Kraft Foods, Inc.	73-150-0003	Methyl Tert-Butyl Ether
Wiman Corporation	73-230-0054	Di(2-Ethylhexyl) Phthalate
Grede–St. Cloud Foundry, Inc.	73-230-0084	Propylene
Tandem Products, Inc.	74-014-0039	Diisocyanates
Diversified Energy Co.	75-070-0014	Ammonia Benzene Cyclohexane n-Hexane Methanol Nitric Acid
Case Tyler	76-015-0028	Ethylene Glycol
Chippewa Valley Ethanol Co.	76-015-0036	Ammonia Benzene
Central Biproducts	77-124-0002	Chlorine
Federal - Mogul Powertrain Systems	79-067-0003	Chromium
Heat-N-Glo	79-067-0034	Diisocyanates
Andersen Corporation	82-015-0002	Diisocyanates Antimony Compounds

Badger Foundry Co.	85-145-0005	Diisocyanates
United Machine and Foundry	85-145-0066	Chromium Nickel
Miller Felpax Corp.	85-145-0069	Diisocyanates
Victor Fluid Power	87-040-0022	Copper Nickel Cobalt Chromium Barium Cadmium

## Attachment 8

### Facilities which reported in 1997 but not subject to reporting in 1998

<u>Facility Name &amp; Location</u>	<u>ERC ID Number</u>	<u>County</u>
The Lamaur Corp., Fridley	02-055-0006	Anoka
H.B. Fuller Co., Fridley	02-055-0018	Anoka
Advanced Flex Inc., Chaska	10-035-0012	Carver
Rotadyne, Inc., Lakeville	19-080-0039	Dakota
Schweigert Foods, Albert Lea	24-005-0001	Freeborn
DS Mfg. Inc., Pine Island	25-099-0003	Goodhue
Riviera Cabinets Inc., Red Wing	25-110-0011	Goodhue
General Dynamics Info. Sys ., Bloomington	27-005-0003	Hennepin
Hiawatha Rubber Co., Brooklyn Center	27-010-0033	Hennepin
Joyner' s, Inc., Brooklyn Park	27-015-0004	Hennepin
MACTac Engineered Products, Hopkins	27-095-0045	Hennepin
Banta Catalog Group, Maple Grove	27-115-0013	Hennepin
ADM Milling Co., Minneapolis	27-135-0058	Hennepin
WD Forbes Co., Inc., Minneapolis	27-135-0106	Hennepin
A & L Labs, Inc., Minneapolis	27-135-0156	Hennepin
Smith Foundry Co., Minneapolis	27-135-0157	Hennepin
Excel Metal Finishing, Minneapolis	27-135-0247	Hennepin
Hiawatha Metalcraft, Inc., Minneapolis	27-135-0277	Hennepin
Daig Corp., Minnetonka	27-140-0012	Hennepin
Willmar Mfg., Willmar	34-175-0045	Kandiyohi
Winco, Inc., Le Center	40-065-0003	LeSueur
New Dimension Plating, Hutchinson	43-055-0004	McCleod
Plato Woodworking, Inc., Plato	43-080-0003	McCleod
Crestliner Boats, Inc., Little Falls	49-120-0025	Morrison
Hewitt Machine & Mfg., Nicollet	52-054-0006	Nicollet
Northwest Airlines, Inc., Rochester	55-095-0187	Olmsted
3M Pilot Plant, Maplewood	62-035-0001	Ramsey
C & H Chemical Co., Inc., St. Paul	62-070-0010	Ramsey
Stroh Brewery, St. Paul	62-070-0064	Ramsey
3M, St. Paul	62-070-0368	Ramsey
Heat-N-Glow, Savage	70-082-0026	Scott
CertainTeed Corp., Shakopee	70-085-0005	Scott
Nickelson Plastics, Inc., Scandia	82-125-0002	Washington



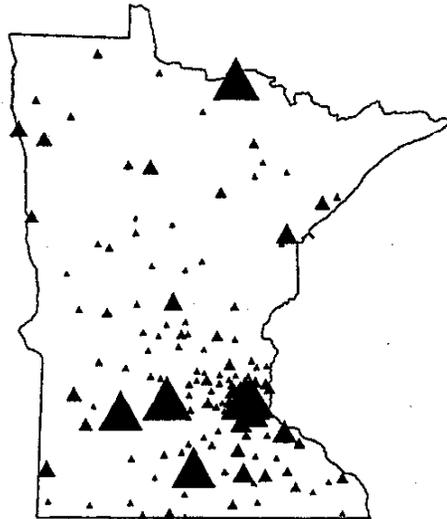
# 1997 TOXICS RELEASE INVENTORY

# MINNESOTA

## State/TRI Data

Population	4,687,408
Square Miles	79,617
Total Facilities	472
Total Forms	1,277
Form As	251

<b>National Rank for Total On- and Off-site Releases</b> <i>(includes transfers out-of-state for disposal)</i>	
Rank	33
Pounds	20,166,465
<b>National Rank for Total On-site Releases</b> <i>(includes quantities released at the facility; excludes quantities transferred to other sites for disposal)</i>	
Rank	32
Pounds	17,598,614
<b>National Rank for Total Releases within State</b> <i>(excludes transfers out-of-state for disposal)</i>	
Rank	34
Pounds	18,651,945
<b>National Rank for Production-related Waste Managed</b>	
Rank	28
Pounds	259,705,844



The largest triangle appearing in the state map represents the largest facility for on-site releases in the state of Minnesota. All triangles are proportionally-sized to represent the amounts of releases at each facility within this state.

## Reported Releases and Waste Management Activities

	Pounds
<b>On-site Releases</b>	<b>17,598,614</b>
Air Emissions	17,023,305
Surface Water Discharges	324,718
Underground Injection Class I Wells	0
Underground Injection Class II-V Wells	0
On-site Land Releases to RCRA Subtitle C Landfills	250
Other On-site Land Releases	250,341
<b>Off-site Releases (Transfers Off-site to Disposal)</b>	<b>2,567,851</b>
<b>Total On- and Off-site Releases</b>	<b>20,166,465</b>
<b>Recycled On-site</b>	<b>161,863,212</b>
<b>Recycled Off-site</b>	<b>21,296,995</b>
<b>Energy Recovery On-site</b>	<b>8,016,186</b>
<b>Energy Recovery Off-site</b>	<b>2,359,251</b>
<b>Treated On-site</b>	<b>34,693,861</b>
<b>Treated Off-site</b>	<b>10,884,199</b>
<b>Quantity Released On- and Off-site</b> <i>(excludes non-production-related releases; e.g. releases due to catastrophic events or remedial actions)</i>	<b>20,592,140</b>
<b>Total Production-related Waste Managed</b>	<b>259,705,844</b>
<b>Total Non-production-related Waste Managed</b>	<b>28,193</b>

ATTACHMENT 9

## Top Five Chemicals for Total Releases In State

CAS Number	Chemical	On-site Releases						Off-site Releases (Transfers Off-site to Disposal)			Total Releases in the State*
		Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection		On-site Releases to Land		Transferred Into State Pounds	Transferred Within State Pounds	Transferred Out of State Pounds	
				Class I Wells Pounds	Class II-V Wells Pounds	RCRA Subtitle C Landfills Pounds	Other On-site Land Releases Pounds				
108-88-3	Toluene	2,235,464	107	0	0	0	0	700	1,152	284	2,237,423
110-54-3	n-Hexane	2,185,071	9	0	0	250	0	0	0	51	2,185,330
1330-20-7	Xylene (mixed isomers)	2,054,464	188	0	0	0	0	0	19,009	0	2,073,661
67-56-1	Methanol	1,746,881	426	0	0	0	2,500	0	2,402	0	1,752,209
7664-41-7	Ammonia	1,608,999	93,155	0	0	0	11,120	0	24,632	0	1,737,906

\*The chemical ranking is based on the amounts in this column; these quantities exclude transfers out of state.



Top Five Facilities for Total On-site Releases

Facility / City, County	On-site Releases						Total On-site Releases*	Off-site Releases (Transfers Off-site to Disposal)	
	Underground Injection			On-site Releases to Land				Transferred Within State	Transferred Out of State
	Air Emissions	Surface Water Discharges	Class I Wells	Class II-V Wells	RCRA Subtitle C Landfills	Other On-site Land Releases			
Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
3M, Hutchinson, McLeod	892,800	0	0	0	0	0	892,800	10,100	8,100
Ford Motor Co., Saint Paul, Ramsey	883,980	0	0	0	0	0	883,980	360	4,467
Boise Cascade Corp., International Falls, Koochiching	671,582	123,440	0	0	0	49,648	844,670	0	0
Cenex Harvest States Co-Op., Mankato, Blue Earth	789,000	0	0	0	250	0	789,250	0	0
Southern Minnesota Beet Sugar, Renville, Renville	778,989	0	0	0	0	7,943	786,932	0	0

\*The facility ranking is based on the amounts in this column.

Top Five Facilities for Total Quantity Released On-site and Off-site

Facility / City, County	Recycled On-site	Recycled Off-site	Energy Recovery On-site	Energy Recovery Off-site	Treated On-site	Treated Off-site	Quantity Released On- and Off-site*	Total Production-related Waste Managed	Total Non-Production-related Waste Managed
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
North Star Recycling, Saint Paul, Ramsey	0	0	0	0	0	0	1,257,613	1,257,613	0
3M, Hutchinson, McLeod	20,930,000	1,141,327	0	152,620	3,241,000	314,600	905,457	26,685,004	0
Ford Motor Co., Saint Paul, Ramsey	0	869,900	115,300	0	155,203	34,300	887,100	2,061,803	0
Boise Cascade Corp., International Falls, Koochiching	0	0	2,500,000	0	7,568,000	0	839,420	10,907,420	0
Cenex Harvest States Co-Op., Mankato, Blue Earth	0	20,100	0	0	12,750	400	790,000	823,250	0

\* The facility ranking is based on the amounts in this column; these quantities exclude non-production-related releases.

For More Information...

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EPA Regional Contact:  
Thelma Codina  
(312) 886-6219  
Fax (312) 353-4788

To obtain TRI data use assistance, call  
TRI User Support Service (TRI-US):  
(202) 260-1531  
Fax (202) 401-2347

## **V. Pollution Prevention Progress Reports**

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

### Definition of Pollution Prevention

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

#### **Input change:**

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

#### **Product reformulation:**

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

#### **Production process redesign:**

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

#### **Operational improvements:**

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

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

Recycling, reuse, or extended use of toxic materials.

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

## Pollution Prevention Plans and Progress Reports

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

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

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

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

The Minnesota Emergency Response Commission (ERC) 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 ERC and Office of Environmental Assistance (OEA) to review the Plan and, potentially, hold a public meeting on the Plan. Citizens may also request

that the Commission formally review a Plan, based on a petition which identifies deficiencies in the Progress Report.

The 1998 Progress Reports are available for review at the ERC office. Copies of the Progress Reports are also available from the Minnesota Pollution Control Agency (MPCA), the Minnesota Technical Assistance Program (MNTAP), and Office of Environmental Assistance (OEA). Progress Reports for years prior to 1995 are available for review at the MPCA's Pollution Prevention Planning Office.

### **Progress Report Issues**

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

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

## Definitions

The statewide list found on pages 133 to 465 summarizes 1998 Progress Report information. 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 470 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 Emergency Response Commission

**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 467 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 1997 & 1998** - actual quantity of this chemical reported on the EPA Form R (Sections 8.1 - 8.7) in 1997 and 1998

**Source Reduction** - describes the reduction activity code(s) that was used to meet pollution prevention objective (see pages 468-469 for source reduction (W) code descriptions)

**Anoka County, City of ANOKA -- FEDERAL CARTRIDGE COMPANY -- ERCID -- 020050004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1991	100					1997 2,100 1998 1,700	1998 / 1997 = 1.1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** EVALUATING NEW PRIMING MIX FORMULATIONS THAT REDUCE OR REPLACE BARIUM COMPOUNDS REQUIRED IN PRIMING MIX FORMULATIONS.

**Non Numeric Progress:** EVALUATE NEW CHEMICALS TO REPLACE BARIUM COMPOUNDS IN PRIMING MIX MANUFACTURING PROCESS, CONTINUE TO RUN LONG-TERM TESTS ON PRIMING MIX MANUFACTURED WITH BARIUM FREE COMPOUNDS. SELL PRIMING MIX WITH LOW OR NO BARIUM CONTENT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1991	8900					1997 7,605 1998 8,270	1998 / 1997 = 1.1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W64 IMPROVED DRAINING PROCEDURES

W68 IMPROVED RINSE EQUIPMENT OPERATION

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P10 ELECTROPLATING

Intended Activity

W81 CHANGED PRODUCT SPECIFICATIONS

W68 IMPROVED RINSE EQUIPMENT OPERATION

W64 IMPROVED DRAINING PROCEDURES

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** EVALUATE NEW CLEANING COMPOUNDS FOR USE IN PICKEL LINES TO REDUCE AMOUNT OF COPPER WASTE IN ACID PICKEL WATERS. EVALUATE NON-COPPER COATED SHOT FOR USE IN SHOTGUN SHELLS.

**Non Numeric Progress:** EVALUATE NEW CLEANING COMPOUNDS FOR USE IN PICKEL LINES TO REDUCE AMOUNT OF COPPER WASTE IN ACID PICKEL WATERS. EVALUATE NON-COPPER COATED SHOT FOR USE IN SHOTGUN SHELLS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1991	200000					1997 169,280 1998 163,430	1998 / 1997 = 1	Yes

**Process Code** P11 EXTRUDING ANY MATERIAL  
 Intended Activity  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Non Numeric Objective:** EVALUATE REPLACEMENT HEAT EXCHANGE FLUID TO REPLACE ETHYLENE GLYCOL IN PLASTIC TUBE MANUFACTURING PROCESS.  
**Non Numeric Progress:** CONTINUE TO DO LITERATURE SEARCH AND CONTACT VENDORS TO OBTAIN AN ACCEPTABLE SUBSTITUTE PRODUCT FOR ETHYLENE GLYCOL. CONTINUE TO CONTACT VENDORS AND OBTAIN QUOTES FOR RECYCLE EQUIPMENT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1991	671					1997 33,135 1998 37,500	1998 / 1997 = 1.1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W42 SUBSTITUTED RAW MATERIALS  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 W42 SUBSTITUTED RAW MATERIALS  
**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Non Numeric Objective:** EVALUATE AND CONTINUE TO TEST AND SELL LEAD FREE PRIMING MIX IN AMMUNITION COMPONENTS. EVALUATE, TEST AND CONTINUE TO SELL NON-LEAD BULLETS AND SHOT TO REPLACE LEAD IN AMMUNITION COMPONENTS.  
**Non Numeric Progress:** CONTINUE TO SELL, LOAD AND PROMOTE LEAD SUBSTITUTE IN CERTAIN AMMUNITION LOADS. CONTINUE TO LOAD AND SELL NON-LEAD BASED PRIMERS IN CERTAIN AMMUNITION LOADS. CONTINUE TO EVALUATE USE OF LEAD SUBSTITUTE MATERIALS FOR USE IN NEW AMMUNITION LOADS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1995	31000					1997 21,000 1998 23,100	1998 / 1997 = 1.1	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** CONTINUE TO EXPERIMENT AND USE NON-LEAD BASED PRIMING MIX THAT WILL NOT REQUIRE USE OF A NITRATE COMPOUND IN THE MANUFACTURE OF THE PRIMING MIX.

**Non Numeric Progress:** CONTINUE TO EVALUATE AND TEST NEW PRIMING MIX COMPOUNDS THAT DO NOT REQUIRE NITRATE COMPOUNDS IN THE MANUFACTURING PROCESS. CONTINUE TO MANUFACTURE AND SELL SOME AMMUNITION PRODUCT THAT HAS PRIMING MIX MANUFACTURED FROM A NITRATE FREE PROCESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Anoka County, City of ANOKA -- HOFFMAN ENCLOSURES INC. - MAIN PLANT -- ERCID -- 020050053**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1994	108828					1997 40,923 1998 29,259	1998 / 1997 = 1	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity

W78 DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

**Non Numeric Objective:** COMPLETED ALL OF OUR POLLUTION PREVENTION NUMERIC OBJECTIVES. NEXT STAGE IS THE ELIMINATION OF LIQUID SPRAY PAINTING. VARIOUS TECHNOLOGICAL LIMITATIONS FOR THIS CONVERSION WITHOUT WHOLESALE CAPITAL REPLACEMENT COULD COST MILLIONS OF DOLLARS.

**Non Numeric Progress:** DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1994	40762					1997 31,318 1998 25,153	1998 / 1997 = 1	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity

W19 DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

**Non Numeric Objective:** COMPLETED ALL OF OUR POLLUTION PREVENTION NUMERIC OBJECTIVES. NEXT STAGE IS THE ELIMINATION OF LIQUID SPRAY PAINTING. VARIOUS TECHNOLOGICAL LIMITATIONS FOR THIS CONVERSION WITHOUT WHOLESAL CAPITAL REPLACEMENT COULD COST MILLIONS OF DOLLARS.

**Non Numeric Progress:** DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1994	33483					1997 30,173	1998 / 1997 = 1	Yes
							1998 20,717		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity  
W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** COMPLETED ALL OF OUR POLLUTION PREVENTION NUMERIC OBJECTIVES. NEXT STAGE IS THE ELIMINATION OF LIQUID SPRAY PAINTING. VARIOUS TECHNOLOGICAL LIMITATIONS FOR THIS CONVERSION WITHOUT WHOLESAL CAPITAL REPLACEMENT COULD COST MILLIONS OF DOLLARS.

**Non Numeric Progress:** DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	55874					1997 44,276	1998 / 1997 = 1	Yes
							1998 37,160		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity  
W19

DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

**Non Numeric Objective:** COMPLETED ALL OF OUR POLLUTION PREVENTION NUMERIC OBJECTIVES. NEXT STAGE IS THE ELIMINATION OF LIQUID SPRAY PAINTING. VARIOUS TECHNOLOGICAL LIMITATIONS FOR THIS CONVERSION WITHOUT WHOLESAL CAPITAL REPLACEMENT COULD COST MILLIONS OF DOLLARS.

**Non Numeric Progress:** DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	55057					1997 32,423	1998 / 1997 = 1	Yes
							1998 28,632		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity  
W19

DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

**Non Numeric Objective:** COMPLETED ALL OF OUR POLLUTION PREVENTION NUMERIC OBJECTIVES. NEXT STAGE IS THE ELIMINATION OF LIQUID SPRAY PAINTING. VARIOUS TECHNOLOGICAL LIMITATIONS FOR THIS CONVERSION WITHOUT WHOLESAL CAPITAL REPLACEMENT COULD COST MILLIONS OF DOLLARS.

**Non Numeric Progress:** DEVELOPMENT OF THE CONVERSION PROCESS OF EXISTING LIQUID PAINT LINES TO POWDER PAINT LINES. DEVELOPING NEW TECHNOLOGIES FOR MULTICOLOR PAINTING. INVESTIGATION OF HVLP LIQUID APPLICATION SYSTEMS.

**Anoka County, City of ANOKA -- IMI CORNELIUS INC. -- ERCID -- 020050003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1990	15720					1997 16,000	1998 / 1997 = 1	Yes
							1998 27,030		

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity

W53

USE OF A DIFFERENT PROCESS CATALYST

**Non Numeric Objective:** NA

**Non Numeric Progress:** NO ALTERNATIVE TO NITRIC ACID WAS FOUND, BUT WE REVIEWED EFFLUENT PH DATA AND CONCLUDED THAT VIRTUALLY ALL OF THE NITRIC ACID USED IS TREATED. RELEASE OF NITRIC ACID IS EXPECTED TO BE VERY SMALL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1994	12200	8,000	8,000	8,000		1997 13,000	1998 / 1997 = 1	No
							1998 13,200		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W65

REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

W59

MODIFIED STRIPPING / CLEANING EQUIPMENT

Employed Activity

W19

CHANGES TO MINIMIZE WASTE SOLVENT AND TO PROLONG SOLVENT LIFE.

W59

MODIFIED STRIPPING / CLEANING EQUIPMENT

**Barriers to P2:** F10 NEW DEGREASING EQUIPMENT HAD TO BE DEBUGGED. CONTINUOUS IMPROVEMENT MADE. SOLVENT USE RATE DOWN TO WHAT IS EXPECTED FOR NEW EQUIPMENT.

**Anoka County, City of ANOKA -- LUND INDUSTRIES INC -- ERCID -- 020050050**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1996	108000					1997 115,700	1998 / 1997 = 1.09	No
							1998 123,900		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

- Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W58 EVALUATE CLOSED MOLDING PROCESS AND OTHER ALTERNATIVE APPLICATION TECHNIQUES AND METHODS FOR SPRAY LAY-UP.
- Non Numeric Objective:** EVALUATION AND IMPLEMENTATION OF RESINS AND GELCOATS WITH LOWER STYRENE CONTENT, NEW PRODUCT TECHNOLOGIES WHICH EMIT LESS STYRENE THAN TRADITIONAL OPEN MOLD SPRAY LAY-UP, AND ALTERNATIVE PRODUCTION MATERIALS AND APPLICATION TECHNIQUES.
- Non Numeric Progress:** CONDUCTING RESEARCH INTO RESIN TRANSFER MOLDING TECHNOLOGY AND CLOSED MOLD OPERATIONS. EVALUATE NEW SPRAY LAY-UP APPLICATION TECHNIQUES, EQUIPMENT, AND MATERIALS. INSTALLED A MORE EFFICIENT DISTILLING UNIT TO REUSE CLEAN UP MATERIAL TO REDUCE WASTE.
- Barriers to P2:**  
F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Anoka County, City of ANOKA -- PROFESSIONAL PLATING -- ERCID -- 020050005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1991	29000	21,500	28,200	29,000	30,000			Yes

- Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)
- Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Anoka County, City of BLAINE -- ARROW CRYOGENICS -- ERCID -- 020200002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Dichloromethane</i>	1998	33600		33,600	8,400	7,560	1997 1998	100,810 67,200	1998 / 1997 = 1.09	No

- Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)
- Intended Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
W64 IMPROVED DRAINING PROCEDURES  
W42 SUBSTITUTED RAW MATERIALS
- Employed Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
W64 IMPROVED DRAINING PROCEDURES

**Barriers to P2:**

**Anoka County, City of BLAINE -- RMS COMPANY -- ERCID -- 020200067**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1997	22261					1997 22,261	1998 / 1997 = 0.02	Yes
							1998 21,808		

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W58 MINIMIZE SCRAP.

Employed Activity

W58 ENGINEERING STRIVES TO OPTIMIZE MATERIAL REQUIREMENTS AND MINIMIZE PROCESS TO REDUCE WASTE VOLUME(S).

**Anoka County, City of CIRCLE PINES -- PDI, INC. -- ERCID -- 020200005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1993	1100					1997 1,236	1998 / 1997 = 1.01	No
							1998 834		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

W73 SUBSTITUTED COATING MATERIALS USED

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W19 MAY CHANGE TYPE OF MIXING, MIXING SPEED, FILTERING TYPE, FORMULATION ORDER, AND TIMING.

**Non Numeric Objective:** REDUCE AMOUNT BY EITHER SUBSTITUTION OF RAW MATERIALS OR LOWERING THE PERCENT USED IN SOME OF THE PRODUCT LINES.

**Non Numeric Progress:** NA

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	737					1997 772 1998 800	1998 / 1997 = 0.98	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W73 SUBSTITUTED COATING MATERIALS USED

W42 SUBSTITUTED RAW MATERIALS

W73 SUBSTITUTED COATING MATERIALS USED

W42 SUBSTITUTED RAW MATERIALS

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W19 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W19 MAY CHANGE TYPE OF MIXING, MIXING SPEED, FILTERING TYPE, FORMULATION ORDER, TIMING, AND OTHER CHANGES.

**Non Numeric Objective:** REDUCE THE AMOUNT BY EITHER SUBSTITUTION OF RAW MATERIALS OR LOWERING THE PERCENT OF HEXANE IN THE PREBLEND FORMULATION. REPLACEMENTS ARE HARD TO FIND AND STILL MAINTAIN A QUALITY PRODUCT AT A REASONABLE COST.

**Non Numeric Progress:** NA

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
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

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	900					1997 1,239 1998 1,303	1998 / 1997 = 1.04	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W73 SUBSTITUTED COATING MATERIALS USED
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W73 SUBSTITUTED COATING MATERIALS USED
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W82 MODIFIED DESIGN OR COMPOSITION
- W42 SUBSTITUTED RAW MATERIALS
- W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

- W19 MAY CHANGE TYPE OF MIXING, MIXING SPEED, FILTERING TYPE, FORMULATION ORDER, TIMING AND OTHER CHANGES.

**Non Numeric Objective:** SUBSTITUTE RAW MATERIALS, OR CHANGE THE PERCENT OF RAW MATERIALS AND DIRECTLY OR INDIRECTLY REDUCE THE TOLUENE. KEEP PRODUCTS OPEN TO FORMULATION CHANGES.

**Non Numeric Progress:** NA

**Barriers to P2:**

- F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE
- F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION
- 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

**Anoka County, City of COLUMBIA HEIGHTS -- INVEST CAST, INC. -- ERCID -- 020400013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1993	861	89,398	69,467	69,467	69,467	1997 89,398 1998 69,467	1998 / 1997 = 0.88	Yes

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1993	543	36,119	17,313	17,313	17,313	1997 36,119 1998 17,313	1998 / 1997 = 0.88	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1993	861	68,332	53,432	53,432	53,432	1997 68,332 1998 53,432	1998 / 1997 = 0.88	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 IMPROVE PRODUCTION PROCESSES TO INCREASE YIELD OF FINISHED PARTS OVER THE SCRAP PRODUCED.

**Anoka County, City of COON RAPIDS -- MIDWEST FINISHING -- ERCID -- 020500002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	458					1997 18,904 1998 18,074	1998 / 1997 = 1	No

**Process Code** P10 ELECTROPLATING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** SUBSTITUTE WITH ALTERNATIVES TO REDUCE THE USAGE.

**Non Numeric Progress:** SUBSTITUTE WITH ALTERNATIVES TO REDUCE THE USAGE.

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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1996	1997	1998	1999			
<i>Phosphoric Acid</i>	1991	241	0	0	0	0	1997 38,450	1998 / 1997 = 1.3	No
							1998 51,000		

**Process Code** P10 ELECTROPLATING

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** MINIMIZE USAGE BY BETTER PRACTICES.

**Non Numeric Progress:** MINIMIZE USAGE BY BETTER PRACTICES.

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

**Anoka County, City of FRIDLEY -- AMERICAN CONVERTERS, INC. -- ERCID -- 020550033**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichloromethane</i>	1994	13300					1997 31,270	1998 / 1997 = 0.7	Yes
							1998 22,551		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** DROP AIR PRESSURE IN SPRAY SYSTEM BY 10%, USE AIRTIGHT CANISTERS TO PREVENT EVAPORATION, TRAIN OPERATORS TO USE SMALLER NOZZLE ADJUSTMENTS, EXPERIMENT WITH WATER-BASED ADHESIVES, USE OF HOT AIR TO MELT SURFACES FOR ADHESION, GREATER USE OF HOT MELT.

**Non Numeric Progress:** NA

**Anoka County, City of FRIDLEY -- ARMAMENT SYSTEMS DIV. OF UNITED DEFENSE -- ERCID -- 020550003**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1988	312					1997 48,300 1998 28,515	1998 / 1997 = 0.57	No

- Process Code** P01 CASTING ANY MATERIAL
- Intended Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.
- Employed Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.
- Process Code** P10 ELECTROPLATING
- Intended Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.
- Employed Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.
- Process Code** P30 STRIPPING ANY COATING
- Intended Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.
- Employed Activity W58 OPERATIONS BEING TRANSFERRED TO COMMERCIAL VENDORS IN AN EFFORT TO REDUCE COSTS.

**Non Numeric Objective:** COPPER PLATING AND STRIPPING OUTSOURCED TO COMMERCIAL VENDORS AT THE END OF 1998. SUBSEQUENT DECOMMISSIONING OF THE OPERATIONS TO BE COMPLETED IN 1999.

**Non Numeric Progress:** PLATING AND FOUNDRY OPERATIONS WERE SHUT DOWN WHICH WILL RESULT IN NO LONGER EXCEEDING THE THRESHOLD FOR REPORTING TRI RELEASES OF COPPER.

**Barriers to P2:**

**Anoka County, City of FRIDLEY -- DUGAS BOWERS PLATING COMPANY -- ERCID -- 020550070**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1996	11	7,496	10,307	12,300	14,800	1997 7,496 1998 10,307	1998 / 1997 = 1.3	No

- Process Code** P10 ELECTROPLATING
- Intended Activity W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Employed Activity W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)
- Intended Activity W58 IMPROVE OXIDATION ABILITY OF THE CYANIDE DESTRUCTION PROCESS IN THE WATER TREATMENT SYSTEM.
- Employed Activity W58 IMPROVE CYANIDE DESTRUCTION PROCESS IN THE WATER TREATMENT SYSTEM AS APPLICABLE WITHOUT REDUCING PRODUCTION.

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 USE OF CYANIDE IS DIRECTLY LINKED TO THE PRODUCTION PROCESS. HAVE DECREASED THE AMOUNT RELEASED TO THE POTW AND ACHIEVED BETTER TREATMENT/RECOVERY ON-SITE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1995	17540	65,969	83,914	100,061	118,073	1997 65,969 1998 83,914	1998 / 1997 = 1.3	Yes

**Process Code** P05

CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Employed Activity  
W71

ION EXCHANGE SYSTEM INSTALLED IN 1997. EMPLOYEES TRAINED ON A REGULAR BASIS TO IMPROVE HOUSEKEEPING AND REDUCE RELEASES.

**Process Code** P10

ELECTROPLATING

Employed Activity  
W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P33

WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Employed Activity  
W19

CONTINUE TO USE AQUEOUS CLEANERS OVER SOLVENTS AS APPROPRIATE.

**Anoka County, City of FRIDLEY -- ECO FINISHING COMPANY -- ERCID -- 020550069**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1998	2670	2,040	2,670	3,000	3,000	1997 2,040 1998 2,693	1998 / 1997 = 1.03	No

**Process Code** P10

ELECTROPLATING

Employed Activity  
W31  
W36  
W21

IMPROVED STORAGE OR STACKING PROCEDURES

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 A COUPLE OF NEW PLATING LINES WERE ADDED IN 1997. INCREASE IN PRODUCTION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1998	40000	16,000	20,000	20,000	20,000	1997 20,130 1998 40,000	1998 / 1997 = 1.99	No

**Process Code** P10

ELECTROPLATING

Employed Activity  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
 W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 NEW PLATING LINES WERE ADDED. SOME BATHS NEED NITRIC TO ADJUST THE PH. PRODUCTION INCREASES.

**Anoka County, City of FRIDLEY -- KURT MANUFACTURING CO. -- ERCID -- 020550071**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
<i>Nitric Acid</i>							1997	35,100	1998 / 1997 = 0.97	No
							1998	37,198		

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 W64 IMPROVED DRAINING PROCEDURES

Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

**Non Numeric Objective:** BASKET DRIP TIMES ARE BEING EXPERIMENTED WITH TO REDUCE DRAG OUT WHICH RESULTS IN LESS CHEMICAL USAGE. IN ADDITION, ALL SPENT NITRIC ACID IS NEUTRALIZED OFF SITE, WITH THE EXPECTATION OF TRACE AMOUNTS IN THE RINSE BATH.

**Non Numeric Progress:** ALL NITRIC ACID USED AT KURT MANUFACTURING WAS NEUTRALIZED AND THERE WERE NO RELEASES TO THE ENVIRONMENT.

**Barriers to P2:**

**Anoka County, City of FRIDLEY -- KURT MANUFACTURING DIE CAST -- ERCID -- 020550014**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
<i>Copper</i>							1997	56,470	1998 / 1997 = 1.15	No
							1998	65,322		

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
 W78 REDUCE EMISSIONS FROM MELTING/HOLDING FURNACES, FUME AND DUST FROM SPITTING DIE CAST MACHINES.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W78 OLD FURNACES REPLACED WITH MORE EFFICIENT UNITS THAT EMIT LESS FUMES.

**Process Code** P28 SMELTING

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** REDUCE RELEASE AND/OR TRANSFERS ASSOCIATED WITH COPPER AT THE SOURCES, INCLUDING FURNACES, DIE CAST MACHINES, AND FINISHING OPERATIONS.

**Non Numeric Progress:** REDUCE RELEASE AND/OR TRANSFERS ASSOCIATED WITH COPPER AT THE SOURCES, INCLUDING FURNACES, DIE CAST MACHINES, AND FINISHING OPERATIONS.

**Barriers to P2:**

**Anoka County, City of FRIDLEY -- KWIK-FILE, LLC -- ERCID -- 020550066**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1995	16696	16,586	17,344	17,344	17,344	1997 16,586	1998 / 1997 = 0.93	No
							1998 17,344		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:**  
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

**Anoka County, City of FRIDLEY -- LARSEN'S MFG. CO. -- ERCID -- 020550053**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1991	37006					1997 15,350	1998 / 1997 = 1.06	Yes
							1998 14,537		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W64 IMPROVED DRAINING PROCEDURES

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W64 IMPROVED DRAINING PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Anoka County, City of FRIDLEY -- MINNCAST, INC. -- ERCID -- 020550056**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1991	1990					1997 3,400	1998 / 1997 = 1.01	No
							1998 2,200		

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

Employed Activity

W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

**Non Numeric Objective:** STAY CURRENT ON TECHNOLOGY AND CHANGES WITHIN INDUSTRY. WILL CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT, BOTH TECHNICALLY AND ECONOMICALLY.

**Non Numeric Progress:** STAY CURRENT ON TECHNOLOGY AND CHANGES WITHIN INDUSTRY. WILL CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT, BOTH TECHNICALLY AND ECONOMICALLY.

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1991	1575					1997 1,610	1998 / 1997 = 1.01	No
							1998 1,650		

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

Employed Activity

W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

**Non Numeric Objective:** STAY CURRENT ON THE TECHNOLOGY AND CHANGES WITHIN OUR INDUSTRY. CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT. REUSE AS MUCH MANGANESE AS POSSIBLE.

**Non Numeric Progress:** STAY CURRENT ON THE TECHNOLOGY AND CHANGES WITHIN OUR INDUSTRY. CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT. REUSE AS MUCH MANGANESE AS POSSIBLE.

**Barriers to P2:**  
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

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1991	320					1997 2,020 1998 1,270	1998 / 1997 = 1.01	No

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W19 UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.  
Employed Activity  
W19 UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

**Non Numeric Objective:** STAY CURRENT ON TECHNOLOGY AND CHANGES WITHIN INDUSTRY. CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT, BOTH TECHNICALLY AND ECONOMICALLY. REUSE AS MUCH NICKEL AS POSSIBLE.

**Non Numeric Progress:** STAY CURRENT ON TECHNOLOGY AND CHANGES WITHIN INDUSTRY. CONTINUE TO EVALUATE DIFFERENT PROCESSES AND EQUIPMENT, BOTH TECHNICALLY AND ECONOMICALLY. REUSE AS MUCH NICKEL AS POSSIBLE.

**Barriers to P2:**  
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

**Anoka County, City of FRIDLEY -- ONAN CORP. -- ERCID -- 020550009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1997	11300	11,300	10,735	10,198	9,688	1997 11,300 1998 10,200	1998 / 1997 = 1.3	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W78 CHANGE FROM SOLVENT-BORNE INSULATING RESIN TO 100% SOLIDS RESINS.  
Employed Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W78 CHANGE FROM SOLVENT-BORNE INSULATING RESIN TO 100% SOLIDS RESINS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1997	27500	27,500	26,125	24,819	24,819	1997 27,500 1998 39,500	1998 / 1997 = 1.2	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1997	13500	13,500	12,825	12,184	11,575	1997 13,500	1998 / 1997 = 1	Yes
							1998 11,000		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1997	9088	9,088	8,634	8,202	7,792	1998 16,300	1998 / 1997 = 0	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W58 REPLACED "DIP & BAKE" VARNISH IMPREGNATION PROCESS WITH TRICKLE IMPREGNATION PROCESS.  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W58 REPLACED "DIP & BAKE" VARNISH IMPREGNATION PROCESS WITH TRICKLE IMPREGNATION PROCESS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	7300	7,300	6,935	6,588	6,259	1997 7,300	1998 / 1997 = 1.3	Yes
							1998 3,801		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	61900	61,900	58,805	55,865	53,072	1997 61,901 1998 52,001	1998 / 1997 = 1.3	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W78 CHANGE FROM SOLVENT-BORNE INSULATING RESIN TO 100% SOLIDS RESINS.  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

Employed Activity

W78 CHANGE FROM SOLVENT-BORNE INSULATING RESIN TO 100% SOLIDS RESINS.  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

**Anoka County, City of FRIDLEY -- SAFETRAN SYSTEMS -- ERCID -- 020550054**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1993	23345					1997 6,060 1998 5,807	1998 / 1997 = 1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

**Anoka County, City of FRIDLEY -- STYLARK, INC. -- ERCID -- 020550016**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1995	92628	29,094	30,703	33,775	37,150			Yes

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitric Acid</i>	1994	96909	22,791	23,777	26,385	29,025	22,791	23,777	1998 / 1997 = 1.01	Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Phosphoric Acid</i>	1994	394392	16,192	18,439	20,285	22,315	16,192	18,439	1998 / 1997 = 1.01	Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Beltrami County, City of SOLWAY -- NORTHWOOD PANELBOARD CO. -- ERCID -- 041850001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Formaldehyde</i>	1991	165000					13,000	14,000	1998 / 1997 = 1.04	No

**Process Code** P08 DRYING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W58 DESIGNED A NEW SECOND GENERATION FLAT LINE DRYER FOR USE IN SOUTH CAROLINE, IF IT WORKS WE WILL INCORPORATE IT HERE.

Employed Activity  
W49 CONTINUE TO EXERT PRESSURE ON RESIN SUPPLIERS TO REDUCE UNREACTED FORMALDEHYDE.

**Non Numeric Objective:** ACHIEVED POSITIVE RESULTS DUE TO ACTUAL STACK TESTS VS. CALCULATIONS AND THE POSITIVE AFFECT OF LOW TEMPERATURE FLAT LINE DRYER AND RUNNING OLD DRYERS AT REDUCED CAPACITIES.

**Non Numeric Progress:** NO SIGNIFICANT PROGRESS SINCE THE DRASTIC IMPROVEMENT IN 1996 AND 1997. CONTINUE TO MAXIMIZE THROUGHPUT THROUGH NEW DRYER. SUPPLIERS ARE TRYING TO IMPROVE THEIR RESINS. CONTINUE TO RECYCLE WOOD WAFERS.

**Barriers to P2:** F10 DEVELOPED A NEW DRYING PROCESS WHICH EMITS LESS THAN ONE PERCENT FORMALDEHYDE AS COMPARED TO OUR OLD DRYERS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Phenol</i>	1991	15000	160	160	160	170	1997 160 1998 160	1998 / 1997 = 1.04	No	

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W49 RESIN MANUFACTURERS CONTINUALLY ATTEMPTING TO REDUCE FREE PHENOL.  
Employed Activity  
W49 RESIN MANUFACTURERS CONTINUALLY ATTEMPTING TO REDUCE FREE PHENOL

**Barriers to P2:** F10 CONTINUE TO EXERT PRESSURE ON RESIN SUPPLIERS TO REDUCE FREE PHENOL IN PRODUCT.

**Benton County, City of RICE -- CENTRAL MARBLE PRODUCTS, INC. -- ERCID -- 050550002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Styrene</i>	1997	13291	13,291	13,005	14,305	15,736	1997 13,291 1998 13,005	1998 / 1997 = 0.98	Yes	

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W74 IMPROVED APPLICATION TECHNIQUES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W74 IMPROVED APPLICATION TECHNIQUES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W74 IMPROVED APPLICATION TECHNIQUES

**Benton County, City of SARTELL -- CHAMPION INTERNATIONAL CORP. -- ERCID -- 050720001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1990	12423					1997 53,214	1998 / 1997 = 1.03	Yes
							1998 34,900		

**Process Code P22 PAPER MANUFACTURING**

Intended Activity

W19 CONTINUE TO TRAIN EMPLOYEES ON THE IMPORTANCE OF RESPONDING TO AND FIXING LEAKS PROMPTLY.

W19 MICROBIOCIDE USAGE'S AND BACTERIA GROWTH WILL BE MONITORED DAILY TO AVOID OVER/UNDER FEEDING, ENSURING PROPER BACTERIA CONTROL ON THE PAPER MACHINES.

Employed Activity

W19 MAINTENANCE EMPLOYEES ATTENDED AND COMPLETED ALL MANDATORY TRAINING.

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** CONTINUE PRACTICING OUR CURRENT PROCEDURES TO MINIMIZE RESPONSE TIME AND CONTAIN AND FIX SYSTEM LEAKS.

**Non Numeric Progress:** CONTINUE PRACTICING OUR CURRENT PROCEDURES TO MINIMIZE RESPONSE TIME AND CONTAIN AND FIX SYSTEM LEAKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrochloric Acid (aerosol forms only)</i>	1990	2000					1997 242,500	1998 / 1997 = 1.01	Yes
							1998 246,360		

**Process Code P22 PAPER MANUFACTURING**

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W19 YEAR AROUND TRAINING SESSIONS GIVEN TO EMPLOYEES ON SOP'S.

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W19 YEAR AROUND TRAINING SESSIONS GIVEN TO EMPLOYEES ON SOP'S.

**Non Numeric Objective:** CONTINUE SEARCHING FOR MORE EFFICIENT POLLUTION CONTROL EQUIPMENT AND TECHNOLOGY AND COMPLY WITH OUR AIR PERMIT. MORE STACK TESTING MAY BE DONE IN THE FUTURE. SINCE HCL IS A NATURAL BYPRODUCT OF COMBUSTION, FUTURE REDUCTIONS ARE NOT ANTICIPATED.

**Non Numeric Progress:** CONTINUE SEARCHING FOR MORE EFFICIENT POLLUTION CONTROL EQUIPMENT AND TECHNOLOGY AND COMPLY WITH OUR AIR PERMIT. OPERATORS HAVE BEEN TESTED AND HAVE RECEIVED THEIR BOILER OPERATOR LICENSES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1995	43000					1997 41,000	1998 / 1997 = 1.03	Yes
							1998 43,020		

**Process Code P22 PAPER MANUFACTURING**

Intended Activity

W58 INSTALLING A REGENERATIVE THERMAL OXIDIZER ON THE TMP HIGH GRADE HEAT RECOVERY EXHAUST VENTS.

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** CONTINUE TO COMPLY WITH OUR AIR PERMIT. MORE STACK TESTING MAY BE DONE IN THE FUTURE. SINCE METHANOL IS A NATURAL BYPRODUCT FROM THE DIGESTION OF WOOD, FUTURE REDUCTIONS ARE NOT ANTICIPATED.

**Non Numeric Progress:** EMPLOYEES HAVE ATTENDED THE NECESSARY TRAINING TO ENSURE PROPER OPERATION OF THE WOODROOM AND TMP EQUIPMENT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Sulfuric Acid (aerosol forms only)</i>	1990	36000					1997 26,000 1998 28,749	1998 / 1997 = 1.01	Yes

**Process Code** P22 PAPER MANUFACTURING

Intended Activity

W19 CONTINUE TO TRAIN EMPLOYEES IN APPROPRIATE STANDARD OPERATING PROCEDURES.

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W19 TRAIN EMPLOYEES IN APPROPRIATE STANDARD OPERATING PROCEDURES.

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** CONTINUE SEARCHING FOR MORE EFFICIENT POLLUTION CONTROL EQUIPMENT AND TECHNOLOGY AND COMPLY WITH OUR AIR PERMIT. MORE STACK TESTING MAY BE DONE IN THE FUTURE. SINCE SULFURIC IS A NATURAL BYPRODUCT OF COMBUSTION, FUTURE REDUCTIONS ARE NOT ANTICIPATED.

**Non Numeric Progress:** CONTINUE SEARCHING FOR MORE EFFICIENT POLLUTION CONTROL EQUIPMENT AND TECHNOLOGY AND COMPLY WITH OUR AIR PERMIT. OPERATORS HAVE BEEN TESTED AND HAVE RECEIVED THEIR BOILER OPERATOR LICENSES.

**Blue Earth County, City of MANKATO -- ARCHER DANIELS MIDLAND CO. -- ERCID -- 071000001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium</i>	1997	47039	47,039	47,000	46,000	46,000			Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1996	660000	305,672	300,000	250,000	250,000	1997 305,672 1998 235,286	1998 / 1997 = 1	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1998	36000		36,000	36,000	36,000	1998 15,305	1998 / 1997 =	Yes

**Process Code** P25 REFINING  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1998	238800		238,800	238,800	238,800	1998 238,800	1998 / 1997 =	Yes

**Process Code** P25 REFINING  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Blue Earth County, City of MANKATO -- CENEX HARVEST STATES -- ERCID -- 071000005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	1100000	790,000	730,000	730,000	730,000	1997 790,400 1998 730,600	1998 / 1997 = 1.18	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W19  
Employed Activity  
W19

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1987	44000					1997 20,100 1998 17,000	1998 / 1997 = 0.94	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** RECLAIM NICKEL FROM SPENT CATALYST.

**Non Numeric Progress:** CONTINUE TO LOOK FOR WAYS TO REDUCE THE AMOUNT OF NICKEL NEEDED TO REACT SOYBEAN OIL WHILE CONTINUING TO INCREASE THE QUANTITY AND QUALITY OF OUR HYDROGENATED PRODUCTS. SEE 1998 P2PR FOR ADDITIONAL INFORMATION.

**Blue Earth County, City of MANKATO -- CROWN BEVERAGE PACKING -- ERCID -- 071000004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1992	218000	110,000	100,000	50,000	0	1997 110,000 1998 100,000	1998 / 1997 = 0.94	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Blue Earth County, City of MANKATO -- MGA GRAPHICS, INC. -- ERCID -- 071000010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	200					1997 21,120 1998 21,615	1998 / 1997 = 0.91	No

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

- W19 NEW TRAINING PROGRAM
- W24 INSTITUTED BETTER LABELING PROCEDURES
- W29 INSTITUTED JUST-IN-TIME INVENTORY
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W58 SWITCHED TO AN AQUEOUS EMULSION MAGNESIUM MATERIAL THAT REQUIRED LESS ACID IN START-UP BATH.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W53 USE OF A DIFFERENT PROCESS CATALYST

**Non Numeric Objective:**

FINDING A MEANS OF FILTRATION FOR OUR ETCHER VENTS TO PREVENT NITRIC ACID FROM BEING EXHAUSTED TO THE OUTSIDE AIR. IMPROVE TRAINING AND EQUIPMENT MAINTENANCE TO REDUCE CHANCE OF SPILLS.

**Non Numeric Progress:**

STILL WORKING WITH TWO MATERIAL SUPPLIERS IN TESTING THEIR NEW AQUEOUS EMULSIONS AND EXPERIMENTING WITH NEW DEVELOPERS IN ORDER TO SWITCH FROM A SOLVENT DEVELOPER TO A MORE ENVIRONMENTALLY SAFE ONE.

**Barriers to P2:**

- F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE
- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- 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

**Blue Earth County, City of MANKATO -- MIDWEST ELECTRIC PRODUCTS -- ERCID -- 07100011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Copper	1991						1997 36	1998 / 1997 = 1.04	Yes
							1998 36		

**Process Code** P18

MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

- W19 PURSUE EFFORTS TO ENSURE REUSE/RECYCLING OF SCRAP COPPER INSTEAD OF SENDING IT TO AN INCINERATOR AND/OR LANDFILL.

**Non Numeric Objective:**

ELIMINATE ALL RELEASES OF PARTICULATE SCRAP COPPER. CURRENTLY CONVERTING TO A NEW "USED OIL ABSORBENTS" VENDOR WHO SEGREGATES METAL DURING THEIR RECYCLING PROCESS. SCRAP METAL SENT TO A RECYCLER.

**Non Numeric Progress:**

CLEAN-UP AND SCRAP CONTROL PROCEDURES REINFORCED WITH MACHINE OPERATORS; I.E., NO METAL SCRAP ALLOWED TO BE DISPOSED OF IN A DUMPSTER.

**Blue Earth County, City of MANKATO -- THE DOTSON COMPANY, INC. -- ERCID -- 07100082**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Copper	1994	3954	143	15,378	15,378	15,378	1997 1,794	1998 / 1997 = 1.2	No
							1998 15,378		

**Process Code** P01

CASTING ANY MATERIAL

Intended Activity

- W58 RESEARCHING WAYS TO REUSE SAND AND LANDFILLED MATERIALS
- W19 CONTINUE TO REDUCE COPPER EMISSIONS BY TRAINING EMPLOYEES TO REDUCE EXCESS USE/LOSS OF SHOT BLAST.
- W29 CONTINUE USING RECYCLED COPPER FROM LOCAL SCRAP DEALER

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W29 USING RECYCLED COPPER FROM LOCAL SCRAP DEALER.  
W58 IMPLEMENTED SCALE SYSTEM TO REDUCE ALLOYS AND ACCURATELY DISTRIBUTE MOLTEN METAL TO VARIOUS POURING STATIONS.  
W19 REDUCE COPPER EMISSIONS BY TRAINING EMPLOYEES IN PROPER JOB MANAGEMENT.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1997	230	230	24,990	24,900	24,900	1997 2,914 1998 24,990	1998 / 1997 = 1.2	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W19 TRAIN EMPLOYEES IN PROPER JOB MANAGEMENT TO REDUCE EXCESS USE/LOSS OF SHOT BLAST.  
W58 CONTINUE IMPLEMENTING A SCALE SYSTEM TO REDUCE ALLOYS AND ACCURATELY DISTRIBUTE MOLTEN METAL TO POURING STATIONS.

Employed Activity

W19 TRAIN EMPLOYEES IN PROPER JOB MANAGEMENT TO REDUCE EXCESS USE/LOSS OF SHOT BLAST.  
W58 CONTINUE TO RESEARCH NEW WAYS TO REUSE SAND AND LANDFILLED MATERIALS.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Brown County, City of NEW ULM -- 3M - ELECTRICAL PRODUCTS DIVISION -- ERCID -- 080800003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,1-dichloro-1-fluoroethane</i>	1996	90000	77,000	44,000	10,000	2,000	1997 73,000 1998 37,360	1998 / 1997 = 1.01	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>4,4'-isopropylidenediphenol</i>	1996	3200					1997 2,400 1998 14,700	1998 / 1997 = 0.99	No

**Process Code** P11 EXTRUDING ANY MATERIAL  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
 W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
 Employed Activity  
 W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** NUMERICAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

**Non Numeric Progress:** NUMERICAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 A VENDOR WAS LOCATED THAT ALLOWED US TO SEND WASTE MATERIAL FOR RECOVERY RATHER THAN SENDING IT TO A LANDFILL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony Compounds</i>	1996	12600	11,800	10,400	9,700	8,800	1997 10,400 1998 12,800	1998 / 1997 = 0.97	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W71  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W71

**Process Code** P11 EXTRUDING ANY MATERIAL  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 MAJOR USAGE OF THIS CHEMICAL IS AN INGREDIENT IN POLY VINYL CHLORIDES AND MASTIC MATERIALS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Chromium Compounds</i>	1996	5900	5,400	4,900	4,600	4,200	1997 2,400	1998 7,250	1998 / 1997 = 1	No

**Process Code** P11 EXTRUDING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 CONTINUING TO LOOK FOR REPLACEMENT PIGMENTS WHICH ARE CHROMIUM FREE. LOCATED A VENDOR THAT IS UTILIZING OUR WASTE AS INGREDIENT IN PRODUCTS THEY PRODUCE, RATHER THAN SENDING IT TO A LANDFILL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Copper Compounds</i>	1996	320000					1997 420,000	1998 189,520	1998 / 1997 = 0.89	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** NUMERICAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

**Non Numeric Progress:** NUMERICAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Decabromodiphenyl Oxide</i>	1996	3800	3,200	2,900	2,600	2,400	1997 5,900 1998 7,510	1998 / 1997 = 0.77	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1996	22000	20,000	18,000	16,000	15,000	1997 18,300 1998 21,500	1998 / 1997 = 0.99	No

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 MAJOR PORTIONS OF LEAD COMPOUNDS USED ON OUR SITE ARE STABILIZERS USED IN POLY VINYL CHLORIDES AND MASTICS RAW MATERIALS. THE BALANCE ARE INCORPORATED IN SOME OF OUR PIGMENT CONCENTRATES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1996	6900					1997 7,300 1998 10,700	1998 / 1997 = 1.03	No

**Process Code** P11 EXTRUDING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W68 IMPROVED RINSE EQUIPMENT OPERATION  
W19  
Employed Activity  
W19  
W68 IMPROVED RINSE EQUIPMENT OPERATION

**Non Numeric Objective:** NUMERIAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

**Non Numeric Progress:** NUMERIAL GOALS WILL BE IMPLEMENTED IN THE YEAR 2000 P2PR UPDATE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 REFORMULATION OF RAW MATERIALS USED IN ONE OF OUR PRODUCTION AREAS HAS ELIMINATED COMPOUND RELEASES FROM THAT AREA. OPTIMIZED OPERATIONS CREATED REDUCTIONS IN SLUDGE GENERATED FROM OUR PLATING PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>							1997 45,421 1998 42,738	1998 / 1997 = 1.03	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

- W68 IMPROVED RINSE EQUIPMENT OPERATION
- W64 IMPROVED DRAINING PROCEDURES

Employed Activity

- W68 IMPROVED RINSE EQUIPMENT OPERATION
- W67 IMPROVED RINSE EQUIPMENT DESIGN

**Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)

Intended Activity

- W68 IMPROVED RINSE EQUIPMENT OPERATION
- W64 IMPROVED DRAINING PROCEDURES

Employed Activity

- W68 IMPROVED RINSE EQUIPMENT OPERATION
- W67 IMPROVED RINSE EQUIPMENT DESIGN

**Non Numeric Objective:** KRAFT DOES NOT OPERATE A CONTROLLED WASTEWATER NEUTRALIZATION PROCESS. IT IS EXTREMELY DIFFICULT TO ESTIMATE THE ACID DISCHARGE BECAUSE IT VARIES WITH OTHER WASTE STREAMS. KRAFT HAS INVESTIGATED A NON-REPORTABLE CLEANER THAT PROVIDES FOOD SAFETY.

**Non Numeric Progress:** THERE ARE CURRENTLY NO SUBSTITUTIONS TO USING PHOSPHORIC ACID. WE ARE IN THE PROCESS OF INVESTIGATING NEW CLEANING CHEMICALS IN 1999.

**Barriers to P2:**

- F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION
- F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
- F10 FOOD SAFETY WILL BE PLACED AT RISK.

**Brown County, City of SPRINGFIELD -- COLEMAN POWERMATE COMPRESSORS -- ERCID -- 081050012**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	27621					1997 27,621 1998 26,199	1998 / 1997 = 0.85	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W41 INCREASED PURITY OF RAW MATERIALS
- W75 CHANGED FROM SPRAY TO OTHER SYSTEM

Employed Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)
- W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** NO LONGER USE SOLVENTS TO CLEAN TANKS BEFORE PAINTING, USE A WATER BASED CLEANER. CHANGE SCHEDULING TO RUN COLORS IN LARGE LOTS TO REDUCE CHANGEOVER. RESEARCHING POWDER COAT SYSTEM TO ELIMINATE OUR TWO MOST USED PAINTS.

**Non Numeric Progress:** CHANGED TO A PAINT THAT CONTAINS LESS VOC'S. WENT TO BLOCK SCHEDULING OF COLORS TO REDUCE SOLVENT USE AND PAINT WASTE INVOLVED IN PAINT COLOR CHANGES. SWITCHED TO WATER BASED CLEANER FOR PREPARING THE TANKS FOR PAINTING.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 NUMBER OF UNITS PRODUCED WAS SMALLER THAN PREVIOUS YEAR. ACTUAL PAINT USE INCREASED BECAUSE WE PRODUCED MORE INDUSTRIAL UNITS. INDUSTRIAL UNITS REQUIRE 3 TO 6 TIMES MORE PAINT THAN PORTABLE UNITS.

**Carlton County, City of CARLTON -- CHEMSTAR PRODUCTS CO. -- ERCID -- 090350002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Propylene Oxide</i>	1994	1500					1997 1,500 1998 750	1998 / 1997 = 0.88	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Carlton County, City of CLOQUET -- POTLATCH CORP. -- ERCID -- 090400003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Acetaldehyde</i>	1994	18199					1997 17,465 1998 17,282	1998 / 1997 = 1.07	Yes

**Process Code** P22 PAPER MANUFACTURING

Intended Activity

W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

W39 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

Employed Activity

W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

W39 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

**Non Numeric Objective:** NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES. GASES ARE COLLECTED AND SENT TO ONE OF TWO POWER BOILERS.

**Non Numeric Progress:** OPERATION OF THE PULP MILL SYSTEM CONTINUES TO IMPROVE WHICH HAS REDUCED THE BLACK LIQUOR LOSSES TO THE SEWER. NON-CONDENSIBLE GAS COLLECTION AND TREATMENT SYSTEM HAS WORKED VERY EFFICIENTLY WITH MINIMAL VENTING EPISODES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	37883					1997 33,496	1998 / 1997 = 1.07	Yes
							1998 172,441		

**Process Code** P22 PAPER MANUFACTURING

Intended Activity

W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

W31 IMPROVED STORAGE OR STACKING PROCEDURES

**Non Numeric Objective:** NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES. GASES ARE COLLECTED AND SENT TO ONE OF TWO POWER BOILERS.

**Non Numeric Progress:** OPERATION OF THE PULP MILL SYSTEM CONTINUES TO IMPROVE WHICH HAS REDUCED BLACK LIQUOR LOSSES TO THE SEWER. NON-CONDENSIBLE GAS COLLECTION AND TREATMENT SYSTEM AND FOUL CONDENSATE STRIPPER HAS WORKED EFFICIENTLY TO REDUCE AMMONIA SENT FOR TREATMENT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1998						1997 38,690	1998 / 1997 = 1.07	Yes
							1998 44,448		

**Process Code** P22 PAPER MANUFACTURING

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** BARIUM COMPOUNDS ARE RELEASED PRIMARILY DUE TO LANDFILLING BOILER ASH. SINCE THE COMPOUNDS ARE PRESENT IN THE PRIMARY FUELS USED IN THE BOILER, REDUCTION OF RELEASES IS DIFFICULT. COMMITTED TO MINIMIZING COAL BURNING AND MAXIMIZING WOOD BURNING.

**Non Numeric Progress:** COAL BURNING IN 1998 WAS 4,518 TONS. THIS IS MUCH LOWER THAN HISTORICAL RATES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Catechol</i>	1991	14770					1997 102,026	1998 / 1997 = 1.07	Yes
							1998 140,411		

**Process Code** P22 PAPER MANUFACTURING



**Process Code** P22 PAPER MANUFACTURING

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** MANGANESE COMPOUNDS ARE RELEASED PRIMARILY DUE TO LANDFILLING BOILER ASH. SINCE THE COMPOUNDS ARE PRESENT IN THE PRIMARY FUELS USED IN THE BOILER, REDUCTION OF RELEASES IS DIFFICULT. COMMITTED TO MINIMIZING COAL BURNING AND MAXIMIZING WOOD BURNING.

**Non Numeric Progress:** COAL BURNING IN 1998 WAS 4,518 TONS. THIS IS MUCH LOWER THAN HISTORICAL RATES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1996	4207926					1997 6,454,191 1998 5,406,400	1998 / 1997 =	Yes

**Process Code** P22 PAPER MANUFACTURING

Intended Activity  
W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
Employed Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W58 NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES.

**Non Numeric Objective:** NEW KRAFT PULP MILL WAS STARTED UP ON 12-2-96. PROCESS INCLUDES A SPILL COLLECTION AND RECLAIM SYSTEM WHICH REDUCES BLACK LIQUOR LOSSES AND A COLLECTION SYSTEM FOR NON-CONDENSIBLE GASES. GASES ARE COLLECTED AND SENT TO ONE OF TWO POWER BOILERS.

**Non Numeric Progress:** OPERATION OF THE PULP MILL SYSTEM CONTINUES TO IMPROVE WHICH HAS REDUCED BLACK LIQUOR LOSSES TO THE SEWER. NON-CONDENSIBLE GAS COLLECTION AND TREATMENT SYSTEM AND FOUL CONDENSATE STRIPPER HAS WORKED EFFICIENTLY .

**Carlton County, City of CLOQUET -- USG INTERIORS, INC. -- ERCID -- 090400005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1998	12472	8,680	12,472	15,000	15,000	1997 10,416 1998 12,472	1998 / 1997 = 1.44	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Vinyl Acetate</i>	1998	11942	8,580	11,942	15,000	15,000	1998	11,942	1998 / 1997 = 0	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Carver County, City of CHANHASSEN -- ROBERTS AUTOMATIC PRODUCTS -- ERCID -- 100300009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Dichloromethane</i>	1990	32000	12,800	12,800	12,800	12,800	1997	22,387	1998 / 1997 = 1	No
							1998	19,560		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Employed Activity  
 W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Carver County, City of CHASKA -- BECKMAN COULTER, INC. -- ERCID -- 100350025**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methanol</i>	1991	13000	14,000	14,000	14,000	500	1997	17,350	1998 / 1997 = 0.93	No
							1998	13,270		

**Process Code** P36 COMPONENT OF A SOLVENT MIXTURE USED TO FIX OR ATTACH BIOLOGICAL CELLS TO GLASS SLIDES.  
 Intended Activity  
 W58 PLANNED MOVE OF THE MANUFACTURING TO AN OUT OF STATE FACILITY BY THE END OF 1999.

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 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

**Carver County, City of CHASKA -- LAKE REGION MFG. CO. -- ERCID -- 100350017**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Cyclohexane</i>	1997	21620	21,620	19,721	0	0	1997	19,721	1998 / 1997 = 1.2	No
							1998	23,522		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W29 ORDER CHEMICALS ON A JUST IN TIME SYSTEM TO REDUCE CHANCE OF EARLY CHANGE OUT OF TANKS.  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES

**Carver County, City of CHASKA -- LIFECORE BIOMEDICAL, INC. -- ERCID -- 100350038**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methanol</i>	1998	52543					1997	39,944	1998 / 1997 = 1.24	No
							1998	52,643		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P08 DRYING  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Non Numeric Objective:** REDUCE THE AMOUNT OF METHANOL GENERATED BY IMPLEMENTING AN AQUEOUS BASED PARTS WASHER.  
**Non Numeric Progress:** PROCEDURAL MODIFICATIONS RESULTED IN A 10 LOG REDUCTION IN METHANOL GENERATION.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES

**Carver County, City of CHASKA -- MANUS PRODUCTS, INC. -- ERCID -- 100350033**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1996	5560	6,210	6,900	7,000	7,000	1997	6,210	1998 / 1997 = 0.88	No
							1998	6,900		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W58

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

**Carver County, City of CHASKA -- MCLAUGHLIN GORMLEY KING CO. -- ERCID -- 100350008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichloromethane</i>	1991	330					1997 36,857 1998 43,800	1998 / 1997 = 1.16	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W68 IMPROVED RINSE EQUIPMENT OPERATION  
Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** INVESTIGATE ELIMINATION AND REDUCTION OPPORTUNITIES. CURRENTLY EVALUATING THE REQUIREMENTS FOR RECOMMISSIONING OUR DICHLOROMETHANE DISTILLATION UNIT.

**Non Numeric Progress:** INSTALLED NEW STAINLESS STEEL PIPING TO RECOMMISSION THE RINSE SYSTEM SPRAY HEADS IN OUR BULK FORMULATING TANK.

**Carver County, City of CHASKA -- QUALI TECH, INC. (DIVISION 1) -- ERCID -- 100350031**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1994	66	15,340	5,676	5,676	5,676	1997 15,340 1998 5,676	1998 / 1997 = 0.37	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1994	247	10,130	9,320	9,320	9,320	1997 10,130 1998 9,320	1998 / 1997 = 0.92	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1994	652	33,281	11,982	11,982	11,982	1997 33,281 1998 11,982	1998 / 1997 = 0.36	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W58 CONTINUE TO MONITOR FILTER PRESSURES TO MINIMIZE AIRBORNE RELEASES.

**Carver County, City of WACONIA -- MEDALLION KITCHENS OF MN -- ERCID -- 101000008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1991	79323	15,150	13,040	12,200	12,200	1997 15,150 1998 13,045	1998 / 1997 = 1.15	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1991		19,418	16,638	15,000	15,000	19,418	16,643	1998 / 1997 = 1.15	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1991	119121	19,092	15,312	13,300	13,300	19,092	15,317	1998 / 1997 = 1.15	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1991	161929	88,499	72,861	66,500	66,500	88,499	72,866	1998 / 1997 = 1.15	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Carver County, City of WACONIA -- PRO-TECH, INC. -- ERCID -- 101000001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1995	21356					1997 20,062 1998 18,554	1998 / 1997 = 0.96	Yes

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W78 REDUCED ETCH RATES IN MICRO ETCHES.  
 W67 IMPROVED RINSE EQUIPMENT DESIGN  
 W19 ISO 9002 IMPLEMENTATION PROGRAM TO LOWER PROCESS VARIATION AND SCRAP RATE.  
 Employed Activity  
 W78 REDUCED ETCH RATES IN MICRO ETCHES.  
 W67 IMPROVED RINSE EQUIPMENT DESIGN  
 W19 ISO 9002 IMPLEMENTATION TO LOWER PROCESS VARIATION AND SCRAP RATE.

**Cass County, City of BACKUS -- EVELAND'S INC. -- ERCID -- 110100004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1993	3975	3,103	4,031	3,100	3,100	1997 3,103 1998 4,030	1998 / 1997 = 1.3	Yes

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Employed Activity  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Chisago County, City of WYOMING -- SUNRISE FIBERGLASS -- ERCID -- 131050003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1993	10448	16,485	30,661	30,661	30,661	1997 16,485 1998 30,661	1998 / 1997 = 1.01	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity  
W39 CONTINUE TO TRAIN ON PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
W49 CONTINUE TO EVALUATE STYRENE SUPPRESSED AND LOW STYRENE RESINS. EVALUATE LOW STYRENE GEL COATS.  
W58 RESEARCH AND EVALUATE IMPINGEMENT MIX APPLICATION.

Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W42 SUBSTITUTED RAW MATERIALS  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
W58 RESEARCH AND EVALUATE IMPINGEMENT MIX APPLICATION.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Clay County, City of MOORHEAD -- AMERICAN CRYSTAL SUGAR CO. - MOORHEAD -- ERCID -- 141450014**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1991	120000					1997 195,400 1998 198,700	1998 / 1997 = 1.02	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** REDUCE AMINE CONTENT IN SUGARBEETS.

**Non Numeric Progress:** CONTINUE GROWER PRACTICES PROGRAM.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrochloric Acid (aerosol forms only)</i>	1991	500					1997 337,000 1998 130,500	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W71

**Non Numeric Objective:** NA

**Non Numeric Progress:** CONTINUE TO USE DESCALER ADDITIVES.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Crow Wing County, City of BRAINERD -- ACROMETAL -- ERCID -- 180150007**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1990	4745					1997 1,612 1998 994	1998 / 1997 = 0.73	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W82 MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:** ON AN ONGOING BASIS, WE WILL CONDUCT A REVIEW OF LITERATURE AND CONSULT WITH INDUSTRY REPS TO DETERMINE WHETHER ANY STATE-OF-THE ART TECHNOLOGIES MIGHT APPLY TO OUR PRODUCT.

**Non Numeric Progress:** IMPROVED PROCESS MODIFICATIONS, OPERATING CONTROLS, AND PRODUCT MANAGEMENT.

**Crow Wing County, City of BRAINERD -- LARCO, INC. -- ERCID -- 180150008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Di(2-ethylhexyl) Phthalate</i>	1992	190					1998 3,294	1998 / 1997 = 0.86	No

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** IF NEW TECHNOLOGIES BECOME AVAILABLE, WE WILL REVISE OUR POLLUTION REDUCTION PLAN. CONTINUE TO STRIVE TO REDUCE THE NON-MOLDED VINYL THAT IS SCRAPPED AND SHIPPED OFF-SITE FOR INCINERATION.

**Non Numeric Progress:** NO NEW PRODUCTS WERE DISCOVERED THAT WOULD MEET OUR REQUIREMENTS. EFFORT WAS PUT INTO BETTER PRODUCT HANDLING TO REDUCE SPILLAGE.

**Barriers to P2:**

**Crow Wing County, City of DEERWOOD -- PARKER HANNIFIN CORP. -- ERCID -- 180540001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead</i>	1997	12020	12,020	12,652	12,000	10,000	1997 12,022 1998 12,654	1998 / 1997 = 1.05	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W81 CHANGED PRODUCT SPECIFICATIONS

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Manganese</i>	1997	54089	54,089	56,935	56,000	45,000	1997 54,091	1998 56,937	1998 / 1997 = 1.05	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W81 CHANGED PRODUCT SPECIFICATIONS

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

**Crow Wing County, City of DEERWOOD -- TRUS JOIST MACMILLAN -- ERCID -- 180540008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Diisocyanates (includes only 20 chemicals)</i>	1992	22490					1997 9,550	1998 34,215	1998 / 1997 = 1.07	No

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W19 90 DAY RESIN TRIAL WITH DIFFERENT SUPPLIER. CHANGES TO SPINNER HEAD SPEEDS.  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** 90 DAY RESIN TRIAL WITH DIFFERENT SUPPLIER, APPROVED SECOND WAX SUPPLIER, CHANGES TO SPINNER HEAD SPEEDS, MONTHLY ENVIRONMENTAL AUDITS. EXPERIMENTED WITH BLENDER DRUM FLIGHTING SYSTEM.

**Non Numeric Progress:** 90 DAY RESIN TRIAL WITH DIFFERENT SUPPLIER, APPROVED SECOND WAX SUPPLIER, CHANGES TO SPINNER HEAD SPEEDS, MONTHLY ENVIRONMENTAL AUDITS. EXPERIMENTED WITH BLENDER DRUM FLIGHTING SYSTEM.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Dakota County, City of BURNSVILLE -- PRINCESS MARBLE COMPANY -- ERCID -- 190060075**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Styrene</i>							1997 17,600	1998 24,750	1998 / 1997 = 1.22	No

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W53 USE OF A DIFFERENT PROCESS CATALYST

**Non Numeric Objective:** TESTING LOW STYRENE PRODUCTS TO USE. COMPANY WAS PURCHASED MID-1998 AND WE ARE NOT SURE OF OUR TOTAL BUSINESS FOR A COMPLETE YEAR (1999). WE PLAN ON TOTALLY REVAMPING OUR P2 PLAN AT THE END OF 1999.

**Non Numeric Progress:** THE COMPANY JUST STARTED AND IS TESTING DIFFERENT PRODUCTS THAT ARE LOW IN VOC.

**Barriers to P2:** F10 CLEAN-UP OF COMPANY AND 1997 STORED WASTE.

**Dakota County, City of EAGAN -- GOPHER RESOURCE CORP. -- ERCID -- 190250016**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony</i>	1991	22864	21,000	23,000	25,000	27,000	1997 2,621,000	1998 / 1997 = 1.16	No
							1998 3,122,000		

**Process Code** P28 SMELTING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 TOTAL RELEASES INCREASE WITH AN INCREASE IN MATERIAL PROCESSED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Arsenic</i>	1991	6983	12,000	13,000	15,000	16,000	1997 602,000	1998 / 1997 = 1.16	No
							1998 723,000		

**Process Code** P28 SMELTING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 TOTAL RELEASES INCREASE WITH MORE MATERIAL PROCESSED. TECHNOLOGY NOT AVAILABLE TO REMOVE MORE ARSENIC FROM THE SLAG.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1993	16184	50,000	50,000	59,000	65,000	1997 290,000	1998 / 1997 = 1.16	No
							1998 333,000		

**Process Code** P28 SMELTING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 NO TECHNOLOGICAL OPTIONS TO REMOVE TRACE AMOUNTS OF COPPER FROM SLAG.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead</i>	1991	182236	280,000	290,000	320,000	350,000	1997 130,280,000 1998 160,290,000	1998 / 1997 = 1.16	No

**Process Code** P28 SMELTING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 TOTAL RELEASES OF LEAD INCREASE WITH THE AMOUNT OF MATERIAL PROCESSED. TECHNICALLY NOT FEASIBLE TO REDUCE FURTHER AT THIS TIME.

**Dakota County, City of EAGAN -- HI-LEX BLEACH-H.L. ACQUISITION CO. -- ERCID -- 190250015**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1996	1072					1997 1,012 1998 966	1998 / 1997 = 0.8	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W19 CONTINUE RESEARCH THROUGH TRADE JOURNALS AND COMMUNICATION WITH THOSE IN THE INDUSTRY.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W19 CONTINUE RESEARCH THROUGH TRADE JOURNALS AND COMMUNICATION WITH THOSE IN THE INDUSTRY.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** CONTINUE RESEARCH EFFORTS THROUGH TRADE JOURNALS AND COMMUNICATIONS WITH THOSE IN THE INDUSTRY IN AN ATTEMPT TO REDUCE OUR METHANOL.

**Non Numeric Progress:** CONTINUE RESEARCH EFFORTS THROUGH TRADE JOURNALS AND COMMUNICATIONS WITH THOSE IN THE INDUSTRY IN AN ATTEMPT TO REDUCE OUR METHANOL.

**Dakota County, City of EAGAN -- MIDWEST COCA-COLA BOTTLING, INC. -- ERCID -- 190250013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1995	6552					1997 4,710	1998 / 1997 = 1.04	No
							1998 4,522		

**Process Code** P14

FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W19 RETRAIN ALL ESSENTIAL PERSONNEL ON PROPER START UP AND SHUT DOWN OF BEVERAGE EQUIPMENT WITH EMPHASIS ON PRODUCT WASTE MINIMIZATION.

Employed Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W19 REFINED STANDARD OPERATING PROCEDURES WERE DEVELOPED, TESTED, AND IMPLEMENTED.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:**

TRAIN PERSONNEL ON PROCESS EQUIPMENT THROUGH STANDARD OPERATING PROCEDURES. IMPROVE PRODUCT YIELDS AND COLLECTION OF PRODUCT WASTES CONTAINING PHOSPHORIC ACID AND SHIPMENT OFF SITE FOR REPROCESSING.

**Non Numeric Progress:**

TRAINING PERSONNEL WAS A KEY COMPONENT TO REDUCTION. APPROXIMATELY 25% OF THE TYPICAL LOSS WAS GAINED. A PROGRAM TO COLLEC HIGH STRENGTH WASTE CONTAINING PHOSPHORIC ACID WAS CONTINUED WITH MORE EMPHASIS IN 1998. CALCULATED REDUCTION 600 LBS.

**Barriers to P2:**

**Dakota County, City of EAGAN -- WATER HEATER INNOVATIONS, INC. -- ERCID -- 190250027**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1992	11203	34,305	12,905	14,195	15,613	1997 34,305	1998 / 1997 = 0.93	Yes
							1998 12,905		

**Process Code** P12

FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

- W19 CHANGED METHOD OF CALCULATING WASTE STREAM BECAUSE WE FOUND AREAS THAT WERE BEING DOUBLE REPORTED.
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Dakota County, City of FARMINGTON -- DUO PLASTICS, INC. -- ERCID -- 190400024**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Di(2-ethylhexyl) Phthalate</i>	1997	24227	24,227	15,798	15,798	15,798	1998 15,798	1998 / 1997 = 0.65	Yes

**Process Code** P20

MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W49 CONTINUE RESEARCH EFFORTS FOR SUBSTITUTIONS.  
W19 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W19 EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
W49 CONTINUED RESEARCH EFFORTS FOR SUBSTITUTIONS.

**Dakota County, City of FARMINGTON -- MARIGOLD FOODS, INC. -- ERCID -- 190400002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1998	18000					1998 20,611	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W71 USE A CHEMICAL RE-USE PROCESS TO REDUCE NITRIC ACID USE.

Employed Activity

W19 NARROW DOWN THE CHEMICAL STRENGTH RANGES FOR NITRIC ACID.

**Non Numeric Objective:** UTILIZING OUR CHEMICAL SUPPLIER TO DEVELOP WAYS TO REDUCE OUR USAGE OF NITRIC ACID IN OUR CLEANING PROCESSES. WILL BE MONITORING OUR WASH TIME CYCLES AND CHEMICAL STRENGTHS.

**Non Numeric Progress:** ADJUSTED CHEMICAL STRENGTH DOWN TO A STRENGTH THAT WOULD STILL MAINTAIN EQUIPMENT CLEANLINESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1996	16458					1997 14,102 1998 20,914	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W71 USE A CHEMICAL RE-USE PROCESS TO REDUCE NITRIC ACID USE.

Employed Activity

W19 NARROW DOWN THE CHEMICAL STRENGTH RANGES FOR NITRIC ACID.

**Non Numeric Objective:** PRODUCTION VOLUMES PROJECTED TO INCREASE AND NECESSITATE AN INCREASE IN CHEMICAL USAGE FOR CLEANING TO MEET STATE AND FEDERAL SANITATION STANDARDS.

**Non Numeric Progress:** ADJUSTED CHEMICAL STRENGTH DOWN TO A STRENGTH THAT WOULD STILL MAINTAIN EQUIPMENT CLEANLINESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F06 SPECIFIC REGULATORY / PERMIT BURDENS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1996	58788					1997 71,388	1998 / 1997 = 1	No
							1998 68,416		

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W71 USING A CHEMICAL RE-USE PROCESS TO REDUCE PHOSPHORIC ACID USE.  
Employed Activity  
W19 NARROW DOWN THE CHEMICAL STRENGTH FOR PHOSPHORIC ACID.

**Non Numeric Objective:** PROJECTED PRODUCTION VOLUMES WILL INCREASE AND NECESSITATE AN INCREASE IN CHEMICAL USAGE FOR CLEANING TO MEET STATE AND FEDERAL SANITATION STANDARDS.

**Non Numeric Progress:** ADJUSTED CHEMICAL STRENGTH DOWN TO A STRENGTH THAT WOULD STILL MAINTAIN EQUIPMENT CLEANLINESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F06 SPECIFIC REGULATORY / PERMIT BURDENS

**Dakota County, City of LAKEVILLE -- CHEMCENTRAL/MINNESOTA -- ERCID -- 190800001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1998	480					1998 480	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Glycol Ethers</i>	1998	575					1998	575	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W64 IMPROVED DRAINING PROCEDURES  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 Employed Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W64 IMPROVED DRAINING PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W64 IMPROVED DRAINING PROCEDURES  
 Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Methanol</i>	1998	790					1998	790	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W64 IMPROVED DRAINING PROCEDURES  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1998	1220					1998 1,220	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W64 IMPROVED DRAINING PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W64 IMPROVED DRAINING PROCEDURES  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W64 IMPROVED DRAINING PROCEDURES

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1998	2170					1998 2,170	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W64 IMPROVED DRAINING PROCEDURES  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W64 IMPROVED DRAINING PROCEDURES

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1998	2470					1997 10,906 1998 2,470	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W64 IMPROVED DRAINING PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W64 IMPROVED DRAINING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
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

**Dakota County, City of LAKEVILLE -- CROWN CORK & SEAL CO. -- ERCID -- 190800011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1993	93000	140,000	140,000	140,000	140,000	1997 140,000	1998 140,000	1998 / 1997 = 1.03	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Manganese Compounds</i>	1993	245	300	270	290	290	1997 300	1998 270	1998 / 1997 = 1.03	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>N-butyl Alcohol</i>	1993	96000	170,000	170,000	170,000	170,000	1997 170,000	1998 170,000	1998 / 1997 = 1.03	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W19 PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Dakota County, City of MENDOTA HEIGHTS -- APPLIED COATING TECHNOLOGY, INC. -- ERCID -- 191050001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Ethyl Ketone</i>	1991	36000	53,114	45,745	41,200	45,300	1997 70,869	1998 85,883	1998 / 1997 = 0.81	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W73 SUBSTITUTED COATING MATERIALS USED  
W53 USE OF A DIFFERENT PROCESS CATALYST  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W73 SUBSTITUTED COATING MATERIALS USED  
W53 USE OF A DIFFERENT PROCESS CATALYST

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 RESTRICTED IN ITS PAINT USE BASED ON CUSTOMER SPECIFICATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	25000		46,494	41,800	46,000	1998 80,875	1998 / 1997 = 0.81	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W53 USE OF A DIFFERENT PROCESS CATALYST  
Employed Activity  
W53 USE OF A DIFFERENT PROCESS CATALYST  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 RESTRICTED IN ITS PAINT USE BASED ON CUSTOMER SPECIFICATIONS.

**Dakota County, City of ROSEMOUNT -- D.P.C. INDUSTRIES, INC. -- ERCID -- 191450018**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1993	219	15	20	20	20	1997 220 1998 221	1998 / 1997 = 1.02	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Dakota County, City of ROSEMOUNT -- KOCH PETROLEUM GROUP -- ERCID -- 191450005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1990	27000					1997 4,000	1998 / 1997 = 0.99	Yes
							1998 8,180		

**Process Code** P25

REFINING

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:**

INSTALLING IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALLING STORAGE TANK GAUGING SYSTEMS, UPGRADING PRODUCT PUMP SEALS AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS.

**Non Numeric Progress:**

UPGRADED TANKS 2,7,48, 49 & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GAS TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTION PERFORMED TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1990	15000					1997 34,000	1998 / 1997 = 1.03	Yes
							1998 64,019		

**Process Code** P25

REFINING

Intended Activity

- W58 EVALUATE INCREASED NITRIFICATION.
- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- W58 EVALUATED INCREASED NITRIFICATION.

**Non Numeric Objective:** EVALUATING TOTAL WATER RECYCLE WITHIN THE REFINERY WHICH WOULD ELIMINATE WASTEWATER DISCHARGE. REDUCE THE AMMONIA LOAD AND IMPROVE THE PERFORMANCE OF THE WASTEWATER TREATMENT PLANT.

**Non Numeric Progress:** REGULAR MAINTENANCE OF SOUR WATER STRIPPERS REDUCES THE AMOUNT OF AMMONIA GOING TO THE WWTP. FOLLOW PROPER OPERATIONAL PROCEDURES TO MAINTAIN NITRIFICATION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Anthracene</i>	1990	150					1997 7	1998 / 1997 = 0.99	Yes
							1998 41		

**Process Code** P25 REFINING

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS; UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY. DUAL PUMP SEALS WERE INSTALLED ON 6 PRODUCT TRANSFER PUMPS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1990	3208					1997 7,803	1998 / 1997 = 1.03	Yes
							1998 8,828		

**Process Code** P25 REFINING

Intended Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:** REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Benzene</i>	1990	182930					1997 18,157	1998 / 1997 = 0.99	Yes
							1998 119,680		

**Process Code** P25 REFINING

Intended Activity

W31

IMPROVED STORAGE OR STACKING PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LDAR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS. UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Biphenyl</i>	1990	850					1997 1,200 1998 1,100	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LDAR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS. UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY. DUAL PUMP SEALS WERE INSTALLED ON 6 PRODUCT TRANSFER PUMPS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1990	210					1997 1,000 1998 1,000	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

W58

Employed Activity

W58

**Non Numeric Objective:** EVALUATE THE CONVERSION FROM CHLORINE GAS AT THE COOLING TOWERS TO BLEACH FOR BIOLOGICAL CONTROL.

**Non Numeric Progress:** STARTED TO USE BLEACH AT THE COOLING TOWERS TO ENHANCE BIOLOGICAL CONTROL. CHLORINE GAS IS STILL USED WITH BLEACH BEING USED IN CERTAIN SITUATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1990	6109					1998 16,501	1998 / 1997 = 1.65	Yes

**Process Code** P25 REFINING

Intended Activity

W19 RECYCLE METAL CATALYST OFF SITE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W19 RECYCLED METAL CATALYST OFF SITE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:** REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cobalt Compounds</i>	1990	532					1997 13,218 1998 13,220	1998 / 1997 = 1.65	Yes

**Process Code** P25 REFINING

Intended Activity

W19 RECYCLE METAL CATALYST OFF SITE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W19 RECYCLED METAL CATALYST OFF SITE.

**Non Numeric Objective:** RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:** REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyclohexane</i>	1990	45000					1997 4,500 1998 41,000	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:**

INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:**

UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1990	76130					1997 8,018 1998 20,515	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene</i>	1990	3800					1997 430 1998 150,980	1998 / 1997 = 0.99	Yes

**Process Code** P25 REFINING

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LDAR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS. UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY. DUAL PUMP SEALS WERE INSTALLED ON 6 PRODUCT TRANSFER PUMPS. DECREASED THE USE OF REFINERY FLARES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1990	23000					1997 23,000 1998 23,000	1998 / 1997 = 0.99	Yes

**Process Code** P25 REFINING

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W42

SUBSTITUTED RAW MATERIALS

W31

IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

W42

SUBSTITUTED RAW MATERIALS

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LDAR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS. UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY. DUAL PUMP SEALS WERE INSTALLED ON 6 PRODUCT PUMPS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1990	474					1997 35,540 1998 31,680	1998 / 1997 = 1.03	Yes

**Process Code** P25 REFINING

Intended Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:** REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1990	22000					1997 58,000 1998 49,000	1998 / 1997 = 0.96	Yes

**Process Code** P25 REFINING

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** EVALUATING ALTERNATIVES TO METHANOL FOR USE WITHIN THE REFINERY.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALTERNATIVES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	167000					1997 100,000 1998 164,000	1998 / 1997 = 0.99	Yes

**Process Code** P25 REFINING

Intended Activity

W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEM, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Naphthalene</i>	1990	10451					1997 7,800	1998 / 1997 = 0.99	Yes
							1998 12,470		

**Process Code** P25

REFINING

Intended Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1990	5526					1997 23,100	1998 / 1997 = 1.65	Yes
							1998 39,700		

**Process Code** P25

REFINING

Intended Activity

- W19 RECYCLE METAL CATALYST OFF SITE.
- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS
- W19 RECYCLE METAL CATALYST OFF SITE.
- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:** REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1990	59386					1997 4,220 1998 122,850	1998 / 1997 = 0.99	Yes

**Process Code** P25 REFINING

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS AND IMPROVE VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Propylene</i>	1990	76000					1998 720,000	1998 / 1997 = 0.99	Yes

**Process Code** P25 REFINING

Intended Activity

- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** CONTINUE LDAR PROGRAM MINIMIZING FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS. UPGRADE TO DUAL SEAL ON PRODUCT PUMPS.

**Non Numeric Progress:** CONTINUE LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY. DUAL PUMP SEALS WERE INSTALLED ON 6 PRODUCT TRANSFER PUMPS. DECREASED FLARING AT REFINERY.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Selenium Compounds</i>	1990	691					1997 7,100 1998 8,005	1998 / 1997 = 1.03	Yes

**Process Code** P25

REFINING

Intended Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:**

RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:**

REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tetrachloroethylene</i>	1994	7400					1997 4,369 1998 4,300	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:**

PERFORM A LEAK DETECTION AND REPAIR PROGRAM WHICH MINIMIZES FUGITIVE EMISSIONS FROM VALVES, FLANGES, PUMPS AND COMPRESSORS.

**Non Numeric Progress:**

MAINTAIN OUR LEAK DETECTION AND REPAIR PROGRAM FOR THE ENTIRE REFINERY.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1990	447420					1997 75,048 1998 203,050	1998 / 1997 = 0.99	Yes

**Process Code** P25

REFINING

Intended Activity

W31

IMPROVED STORAGE OR STACKING PROCEDURES

W31

IMPROVED STORAGE OR STACKING PROCEDURES

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W31

IMPROVED STORAGE OR STACKING PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1990	360781					1997 93,895	1998 / 1997 = 0.99	Yes
							1998 133,082		

**Process Code** P25 REFINING

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** INSTALL IMPROVED FLOATING ROOF SEALS ON PRODUCT STORAGE TANKS, INSTALL STORAGE TANK GAUGING SYSTEMS, UPGRADE PRODUCT PUMP SEALS, AND IMPROVING VAPOR TIGHTNESS OF GASOLINE TANKER TRUCKS. PERFORM LDAR.

**Non Numeric Progress:** UPGRADED TANKS 2,7,48,49, & 64 WITH FLOATING ROOF SEAL. INSTALLED NEW GAUGING SYSTEMS ON 10 TANKS, DUAL PUMP SEALS ON 6 PRODUCT TRANSFER PUMPS. VAPOR TIGHTNESS TESTED GASOLINE TANK TRUCKS. LEAK TESTING AND INTERNAL INSPECTIONS PERFORMED ON TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1990	2073					1997 25,600	1998 / 1997 = 1.65	Yes
							1998 53,200		

**Process Code** P25 REFINING

Intended Activity

W19 RECYCLED METAL CATALYST OFF SITE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W19 RECYCLED METAL CATALYST OFF SITE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:**

RECYCLE AS MANY WASTE STREAMS AS POSSIBLE THAT CONTAIN THIS CHEMICAL BACK INTO THE REFINERY. EVALUATE IMPROVEMENTS TO FCC OPERATION TO REDUCE PARTICULATE EMISSIONS.

**Non Numeric Progress:**

REGENERATOR CYCLONES CAPTURES AND RECIRCULATES A PORTION OF CATALYST FINES WHICH THEN GO THROUGH ESP. REGENERATOR SET PRESSURE INCREASED TO REDUCE ACCIDENTAL RELEASES OF PARTICULATE EMISSIONS. FOLLOW PROPER OPERATION AND MAINTENANCE OF ESP.

**Dakota County, City of ROSEMOUNT -- KOCH SULFUR PRODUCTS COMPANY -- ERCID -- 191450006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Benzene</i>	1994	360					1997 570	1998 / 1997 = 0.82	Yes
							1998 480		

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:**

REDUCE TANK CORROSION THROUGH AN INSPECTION AND MAINTENANCE PROGRAM FOR SPENT ACID STORAGE TANKS. INVESTIGATE ENERGY CONSERVATION METHODS TO REDUCE FUEL CONSUMPTION.

**Non Numeric Progress:**

CONTINUED TO FOLLOW WRITTEN PLAN FOR INSPECTING AND MAINTAINING SPENT ACID STORAGE TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	960					1997 1,500	1998 / 1997 = 0.82	Yes
							1998 1,200		

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:**

REDUCE TANK CORROSION THROUGH AN INSPECTION AND MAINTENANCE PROGRAM FOR SPENT ACID STORAGE TANKS. INVESTIGATE ENERGY CONSERVATION METHODS TO REDUCE FUEL CONSUMPTION.

**Non Numeric Progress:**

CONINUE TO FOLLOW THE WRITTEN PLAN FOR INSPECTING AND MAINTAINING SPENT ACID STORAGE TANKS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Sulfuric Acid (aerosol forms only)</i>	1990	25000					1997 31,000 1998 33,000	1998 / 1997 = 1.05	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity

W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** IMPROVE EFFICIENCY OF MIST ELIMINATOR BY CLEANING OR REPLACING FILTERS AND PERFORMING OTHER MAINTENANCE. REDUCE TANK CORROSION THROUGH AN INSPECTION AND MAINTENANCE PROGRAM FOR SPENT ACID STORAGE TANKS.

**Non Numeric Progress:** MIST ELIMINATOR WAS CLEANED DURING MAINTENANCE ACTIVITIES IN LATE 1997. MAINTENANCE REQUIRES A UNIT SHUTDOWN PERFORMED EVERY 2 YEARS. CONTINUE TO FOLLOW THE WRITTEN PLAN FOR INSPECTING AND MAINTAINING SPENT ACID STORAGE TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	1330					1997 2,200 1998 1,700	1998 / 1997 = 0.82	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** REDUCE TANK CORROSION THROUGH AN INSPECTION AND MAINTENANCE PROGRAM FOR SPENT ACID STORAGE TANKS. INVESTIGATE ENERGY CONSERVATION METHODS TO REDUCE FUEL CONSUMPTION.

**Non Numeric Progress:** CONTINUED TO FOLLOW THE WRITTEN PLAN FOR INSPECTING AND MAINTAINING SPENT ACID STORAGE TANKS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	1096					1997 1,800 1998 1,400	1998 / 1997 = 0.82	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Employed Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** REDUCE TANK CORROSION THROUGH AN INSPECTION AND MAINTENANCE PROGRAM FOR SPENT ACID STORAGE TANKS. INVESTIGATE ENERGY CONSERVATION METHODS TO REDUCE FUEL CONSUMPTION.

**Non Numeric Progress:** CONTINUED TO FOLLOW THE WRITTEN PLAN FOR INSPECTING AND MAINTAINING SPENT ACID STORAGE TANKS.

**Dakota County, City of ROSEMOUNT -- SPECTRO ALLOYS CORP. -- ERCID -- 191450009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Aluminum (fume Or Dust)</i>		38751					1997 31,000	1998 / 1997 = 1.1	Yes
							1998 56,540		

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** REFER TO 1998 P2PR.

**Non Numeric Progress:** REFER TO 1998 P2PR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>		30					1997 19	1998 / 1997 = 1.1	Yes
							1998 22		

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** REFER TO 1998 P2PR.

**Non Numeric Progress:** REFER TO 1998 P2PR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1995	1067					1997 1,300	1998 / 1997 = 1.1	Yes
							1998 2,370		

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Non Numeric Objective:** REFER TO 1998 P2PR.  
**Non Numeric Progress:** REFER TO 1998 P2PR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrochloric Acid (aerosol forms only)</i>	1994	634					1997 44,880 1998 64,785	1998 / 1997 = 1.1	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Non Numeric Objective:** REFER TO 1998 P2PR.  
**Non Numeric Progress:** REFER TO 1998 P2PR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1995	63					1997 49 1998 90	1998 / 1997 = 1.1	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
**Non Numeric Objective:** REFER TO 1998 P2PR.  
**Non Numeric Progress:** REFER TO 1998 P2PR.

**Dakota County, City of SOUTH ST. PAUL -- WATEROUS CO. -- ERCID -- 191550013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	27000					1997 56,900 1998 59,800	1998 / 1997 = 1.04	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

- Intended Activity
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
  - W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
  - W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
  - W74 IMPROVED APPLICATION TECHNIQUES
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** OUR PLANNED CAPITAL PAINT SYSTEM IMPROVEMENT PROJECT, SCHEDULED FOR 1999, HAS BEEN POSTPONED, BUT IS STILL PLANNED.

**Non Numeric Progress:** BEGINNING 1-1-98, A BRUSH PAINTING "TOUCH-UP" PROCESS WAS CHANGED FOR PRODUCTION REASONS. THIS CHANGE RESULTED IN A DECREASE IN PAINT USE. XYLENE USE IN 1998 INCREASED FROM 1997 TOTALS BY ONLY 0.6 % DESPITE A PROD. RATIO OF 1.04 OVER THE SAME PERIOD.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Dodge County, City of DODGE CENTER -- MCNEILUS TRUCK & MFG., INC. -- ERCID -- 200300001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1997	160000					1997 160,280 1998 150,310	1998 / 1997 = 1.15	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

- Intended Activity
- W42 SUBSTITUTED RAW MATERIALS
  - W81 CHANGED PRODUCT SPECIFICATIONS

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

- Intended Activity
- W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** STRIVE TO FABRICATE METAL PRODUCTS WHILE GENERATING A MINIMUM AMOUNT OF SCRAP.

**Non Numeric Progress:** METAL USAGE IS A DIRECT FUNCTION OF THE NUMBER OF PRODUCTS PRODUCED. ADDITIONAL REDUCTION OBJECTIVES ARE NOT FEASIBLE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1996	94000					1997 104,800 1998 99,000	1998 / 1997 = 1.15	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

- Intended Activity
- W74 IMPROVED APPLICATION TECHNIQUES
  - W73 SUBSTITUTED COATING MATERIALS USED

- Employed Activity
- W74 IMPROVED APPLICATION TECHNIQUES
  - W73 SUBSTITUTED COATING MATERIALS USED

**Non Numeric Objective:** SEEK PAINT PRODUCTS FROM VENDORS WITH THE LOWEST POSSIBLE REPORTABLE CHEMICAL CONTENT POSSIBLE. TRAIN EMPLOYEES IN THE MOST EFFICIENT PAINT APPLICATION TECHNIQUES TO MINIMIZE WASTE.

**Non Numeric Progress:** EMPLOYEES TRAINED ON PROPER PAINTING TECHNIQUES TO MINIMIZE OVERSPRAY. VENDOR HAS INTRODUCED AND TESTED ALTERNATIVE PAINT PRODUCTS WITH LOWER VOC CONTENT WHICH WE'VE INCORPORATED IN OUR PROCESS.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1996	15000					1997 15,600	1998 / 1997 = 1.15	Yes
							1998 18,600		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W74 IMPROVED APPLICATION TECHNIQUES  
W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W73 SUBSTITUTED COATING MATERIALS USED  
W74 IMPROVED APPLICATION TECHNIQUES

**Non Numeric Objective:** SEEK PAINT PRODUCTS FROM VENDORS WITH THE LOWEST POSSIBLE REPORTABLE CHEMICAL CONTENT POSSIBLE. TRAIN EMPLOYEES IN THE MOST EFFICIENT PAINT APPLICATION TECHNIQUES TO MINIMIZE WASTE.

**Non Numeric Progress:** EMPLOYEES TRAINED ON PROPER PAINTING TECHNIQUES TO MINIMIZE OVERSPRAY. VENDOR HAS INTRODUCED AND TESTED ALTERNATIVE PAINT PRODUCTS WITH LOWER VOC CONTENT WHICH WE'VE INCORPORATED IN OUR PROCESS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1996	33000					1997 35,047	1998 / 1997 = 1.15	No
							1998 38,200		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W73 SUBSTITUTED COATING MATERIALS USED  
W74 IMPROVED APPLICATION TECHNIQUES

Employed Activity

W74 IMPROVED APPLICATION TECHNIQUES  
W73 SUBSTITUTED COATING MATERIALS USED

**Non Numeric Objective:** SEEK PAINT PRODUCTS FROM VENDORS WITH THE LOWEST POSSIBLE REPORTABLE CHEMICAL CONTENT. TRAIN EMPLOYEES IN THE MOST EFFICIENT PAINT APPLICATION TECHNIQUES TO MINIMIZE WASTE.

**Non Numeric Progress:** EMPLOYEES TRAINED ON PROPER PAINTING TECHNIQUES TO MINIMIZE OVERSPRAY. VENDOR HAS INTRODUCED AND TESTED ALTERNATIVE PAINT PRODUCTS WITH LOWER VOC CONTENT WHICH WE'VE INCORPORATED IN OUR PROCESS.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1997	86000					1997 86,001 1998 31,001	1998 / 1997 = 1.15	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W81 CHANGED PRODUCT SPECIFICATIONS

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** STRIVE TO FABRICATE METAL PRODUCTS WHILE GENERATING A MINIMUM AMOUNT OF SCRAP.

**Non Numeric Progress:** METAL USAGE IS A DIRECT FUNCTION OF THE NUMBER OF PRODUCTS PRODUCED. ADDITIONAL REDUCTION OBJECTIVES ARE NOT FEASIBLE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	15000					1997 19,300 1998 14,900	1998 / 1997 = 1.15	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W73 SUBSTITUTED COATING MATERIALS USED

W74 IMPROVED APPLICATION TECHNIQUES

Employed Activity

W73 SUBSTITUTED COATING MATERIALS USED

W74 IMPROVED APPLICATION TECHNIQUES

**Non Numeric Objective:** SEEK PAINT PRODUCTS FROM VENDORS WITH THE LOWEST POSSIBLE REPORTABLE CHEMICAL CONTENT POSSIBLE. TRAIN EMPLOYEES IN THE MOST EFFICIENT PAINT APPLICATION TECHNIQUES TO MINIMIZE WASTE.

**Non Numeric Progress:** EMPLOYEES TRAINED ON PROPER PAINTING TECHNIQUES TO MINIMIZE OVERSPRAY. VENDOR HAS INTRODUCED AND TESTED ALTERNATIVE PAINT PRODUCTS WITH LOWER VOC CONTENT WHICH WE'VE INCORPORATED IN OUR PROCESS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1996	41000					1997 55,000 1998 65,000	1998 / 1997 = 1.15	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W74 IMPROVED APPLICATION TECHNIQUES

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W73 SUBSTITUTED COATING MATERIALS USED

W74 IMPROVED APPLICATION TECHNIQUES

**Non Numeric Objective:** BUY PAINT WITH THE LOWEST POSSIBLE REPORTABLE CHEMICAL CONTENT. TRAIN EMPLOYEES IN THE MOST EFFICIENT PAINT APPLICATION TECHNIQUES TO MINIMIZE OVERSPRAY OF PRIMER MATERIAL.

**Non Numeric Progress:** EMPLOYEES AND CONTRACTORS HAVE RECEIVED TRAINING ON PROPER PAINTING TECHNIQUES TO MINIMIZE OVERSPRAY OF PAINT AND PRIMER PRODUCTS. SINCE PRIMER USAGE IS A DIRECT FUNCTION OF THE NUMBER OF UNITS PRODUCED, IT IS NOT FEASIBLE TO ESTABLISH P2 OBJECTIVES.

**Douglas County, City of ALEXANDRIA -- 3M - ABRASIVES SYS. DIV. -- ERCID -- 210050001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>2-ethoxyethanol</i>	1996	15000	16,000	8,000	4,000	4,000	1997	14,600	1998 / 1997 = 0.9	No
							1998	13,700		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Formaldehyde</i>	1996	26000	29,000	30,000	25,000	25,000	1997	27,600	1998 / 1997 = 0.9	Yes
							1998	21,200		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Ethyl Ketone</i>	1996	16000	17,000	18,000	20,000	20,000	1997	17,330	1998 / 1997 = 0.92	No
							1998	15,800		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W67 IMPROVED RINSE EQUIPMENT DESIGN

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Phenol</i>	1996	46000	48,000	50,000	45,000	45,000	1997	45,600	1998 / 1997 = 0.9	Yes
							1998	39,200		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS

**Douglas County, City of ALEXANDRIA -- DOUGLAS MACHINE -- ERCID -- 210050019**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Zinc Compounds</i>	1998	5404	5,080	5,404	5,945	6,539	1997	5,231	1998 / 1997 = 0.91	No
							1998	5,632		

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 W64 IMPROVED DRAINING PROCEDURES  
 Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

**Barriers to P2:**

**Faribault County, City of ELMORE -- ELMORE TRUCK ACCESSORIES, INC. -- ERCID -- 220390003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Styrene</i>	1994	7051					1997	7,343	1998 / 1997 = 0.84	No
							1998	12,400		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity  
W75 CHANGED FROM SPRAY TO OTHER SYSTEM

**Barriers to P2:** F10 RESIN TRANSFER MOLDING DID NOT REACH AN ACCEPTABLE SUCCESS RATE TO ALLOW US TO INTRODUCE IT INTO PRODUCTION. WE ARE WORKING ON A NEW PROCESS TO REPLACE THE RTM PROCESS.

**Faribault County, City of WINNEBAGO -- CORN PLUS -- ERCID -- 221100019**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1997	826	826	950	1,000	1,050	1997 826	1998 / 1997 = 1.15	No
							1998 950		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W39 STORAGE TANKS WERE PLACED IN CONTAINMENT, PIPING WAS CHANGED FROM POLY TUBING TO WELDED STAINLESS STEEL.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W39 STORAGE TANKS WERE PLACED IN CONTAINMENT, PIPING WAS CHANGED FROM POLY TUBING TO WELDED STAINLESS STEEL

**Non Numeric Objective:** IT IS NOT ECONOMICALLY FEASIBLE TO TRY AND REDUCE THE SMALL AMOUNT OF EMISSIONS PER YEAR.

**Non Numeric Progress:** WILL CONTINUE TO PERFORM ONGOING TRAINING FOR EMPLOYEES AND OUTSIDE CARRIERS TO PREVENT SPILLS. PREVENTATIVE MAINTENANCE OF EQUIPMENT IS ONGOING.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Faribault County, City of WINNEBAGO -- CROWN TONKA WALK-INS -- ERCID -- 221100014**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichlorodifluoromethane</i>	1991	5					1997 5	1998 / 1997 = 0.86	No
							1998 5		

**Process Code** P13 FOAM BLOWING

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W42 SUBSTITUTED RAW MATERIALS

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1991	5							No
<b>Process Code</b> P13	FOAM BLOWING								
Intended Activity									
W42	SUBSTITUTED RAW MATERIALS								
W42	SUBSTITUTED RAW MATERIALS								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								

**Non Numeric Objective:** LOOK AOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichlorofluoromethane</i>	1991	5					1997 / 1997 = 0.86		No
						1997 5	1998 5		
<b>Process Code</b> P13	FOAM BLOWING								
Intended Activity									
W42	SUBSTITUTED RAW MATERIALS								
W42	SUBSTITUTED RAW MATERIALS								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Fillmore County, City of CHATFIELD -- STRONGWELL - CHATFIELD DIVISION -- ERCID -- 230500002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony Compounds</i>	1998	350					1998 / 1997 = 1.03		No
						1997 500	1998 350		
<b>Process Code</b> P12	FIBERGLASS PRODUCT MANUFACTURING								

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

W58 IMPROVED MEASUREMENT OF EMISSIONS.

**Non Numeric Objective:** IMPROVE VERIFICATION OF MEASUREMENTS USED FOR EMISSIONS REPORTING. THE REDUCTION IN REPORTED EMISSIONS WAS DUE TO THE FACT THAT WE PROCESSED 30% LESS ANTIMONY IN 1998 THAN IN 1997.

**Non Numeric Progress:** NO PROGRESS.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Decabromodiphenyl Oxide</i>	1998	1740					1997 3,000	1998 / 1997 = 1.03	No
							1998 1,740		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W83 MODIFIED PACKAGING

W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Non Numeric Objective:** IMPROVE MEASUREMENT OF EMISSIONS. REDUCTION IN EMISSIONS WAS DUE TO A MORE ACCURATE ESTIMATE OF MATERIAL RELEASED IN 1998 AND MATERIAL USED FOR ENERGY RECOVERY OFFSITE IN 1998. PURCHASE PRODUCT IN RETURNABLE CONTAINERS INSTEAD OF THROWAWAY BAGS.

**Non Numeric Progress:** NO PROGRESS.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1998	13970					1997 17,600	1998 / 1997 = 1.03	No
							1998 13,970		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W73 SUBSTITUTED COATING MATERIALS USED

W78

**Non Numeric Objective:** PROCESS IMPROVEMENTS AND SUBSTITUTION OF ALTERNATE MATERIALS.

**Non Numeric Progress:** NO PROGRESS.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-methyl-2-pyrrolidone</i>	1998	24420					1997 23,350	1998 / 1997 = 1.03	No
							1998 24,420		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W64 IMPROVED DRAINING PROCEDURES



**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1991	71978	50,384	50,384	50,384	48,300	1997 67,408	1998 / 1997 = 1.04	No
							1998 83,723		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W53 USE OF A DIFFERENT PROCESS CATALYST  
 W24 INSTITUTED BETTER LABELING PROCEDURES

**Barriers to P2:**  
 F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1991	56920	17,806	17,570	17,218	16,873	1997 17,806	1998 / 1997 = 1.04	Yes
							1998 20,426		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W74 IMPROVED APPLICATION TECHNIQUES  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1995	9000	22,768	22,008	19,000	19,000	1997 22,768 1998 20,059	1998 / 1997 = 1.04	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W67 IMPROVED RINSE EQUIPMENT DESIGN  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W53 USE OF A DIFFERENT PROCESS CATALYST  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	78095	54,666	50,761	48,730	46,781	1997 54,622 1998 63,149	1998 / 1997 = 1.04	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W75 CHANGED FROM SPRAY TO OTHER SYSTEM  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:**  
 F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
 F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	49999	35,000	32,500	31,000	30,000	1997 37,676 1998 25,065	1998 / 1997 = 1.04	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W74 IMPROVED APPLICATION TECHNIQUES  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W74 IMPROVED APPLICATION TECHNIQUES

**Goodhue County, City of CANNON FALLS -- CANNON EQUIPMENT COMPANY -- ERCID -- 250250002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Nickel Compounds</i>	1990	3630	725	726	720	720	1998	2,624	1998 / 1997 = 1.05	No

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W49  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W49  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Zinc Compounds</i>	1990	10927	305	296	320	320	1997	18,642	1998 / 1997 = 1.05	No
							1998	19,945		

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W49  
 Employed Activity  
 W49  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Goodhue County, City of CANNON FALLS -- THE BERGQUIST COMPANY -- ERCID -- 250250008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Toluene</i>	1991	14431	448	584	500	500	1997	21,886	1998 / 1997 = 1.05	No
							1998	26,183		

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
W58  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W82 MODIFIED DESIGN OR COMPOSITION  
W81 CHANGED PRODUCT SPECIFICATIONS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1991	28594	13,624	13,078	12,000	12,000	1997 576,818 1998 556,127	1998 / 1997 = 1.05	No	

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL

Intended Activity  
W58  
W19  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
W42 SUBSTITUTED RAW MATERIALS  
W81 CHANGED PRODUCT SPECIFICATIONS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Goodhue County, City of KENYON -- FOLDCRAFT COMPANY -- ERCID -- 250790015**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Dichloromethane</i>	1998	12656		12,656			1998 13,393	1998 / 1997 = 1.05	No	

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity  
W89 CHANGING FROM FIBERGLASS TO POLYURETHANE. USE WILL BE SIGNIFICANTLY REDUCED IN 1999 WHEN THE CHANGE IS COMPLETED AND THE NEW MOLDS ARE FINISHED.  
Employed Activity  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Styrene	1994	3062	6,059	7,721	5,019	5,019	1997 6,059 1998 7,721	1998 / 1997 = 1.05	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
 W19 TWICE A YEAR (SPRING AND WINTER) THE FACILITY IS TESTED FOR STYRENE EMISSIONS

**Barriers to P2:** F10 THE CONVERSION FROM FIBERGLASS PRODUCTION TO POLYURETHANE TAKES TIME AND IS STILL IN THE PROCESS OF CHANGING OVER.

**Goodhue County, City of PINE ISLAND -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. -- ERCID -- 250990001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Nitrate Compounds (water dissociable)	1996	533					1997 533 1998 533	1998 / 1997 = 0.63	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
 Intended Activity  
 W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
 W71 CHEMICAL STRENGTH KITS ARE USED ON A NUMBER OF THE CLEANING SYSTEMS TO MONITOR CHEMICAL USE AND IDENTIFY OVER-USE.  
 Employed Activity  
 W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
 W71 CHEMICAL STRENGTH KITS ARE USED ON A NUMBER OF THE CLEANING SYSTEMS TO MONITOR CHEMICAL USE AND IDENTIFY OVER-USE.

**Non Numeric Objective:** SOURCE CHEMICALS WILL BE USED ONLY AS REQUIRED BY FDA. EXCESSIVE USE OF THE NITRATE COMPOUND PRODUCING CHEMICALS WILL BE AVOIDED. CONTINUE TO RESEARCH OPTIONS IN CHANGING EQUIPMENT, THE PROCESS, OR THE CLEANING CHEMICALS USED.

**Non Numeric Progress:** SOURCE CHEMICALS WILL BE USED ONLY AS REQUIRED BY FDA. EXCESSIVE USE OF THE NITRATE COMPOUND PRODUCING CHEMICALS WILL BE AVOIDED. CONTINUE TO RESEARCH OPTIONS IN CHANGING EQUIPMENT, THE PROCESS, OR THE CLEANING CHEMICALS USED.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
 F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Goodhue County, City of RED WING -- ARCHER DANIELS MIDLAND CO. -- ERCID -- 251100005**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	540014					1997 375,389 1998 325,654	1998 / 1997 = 1.01	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** CONTINUE TO REDUCE THE AMOUNT USED THROUGH BETTER MAINTENANCE OF PUMPS, PIPING, CONVEYORS, AND DISTILLATION EQUIPMENT AND BY HAVING FEWER BREAKDOWNS, SWITCHOVERS, AND START-UPS.

**Non Numeric Progress:** EVEN THOUGH OUR PRODUCTION TONNAGE WAS HIGHER THAN IN 1997, OUR USE WAS LESS BECAUSE OF BETTER MAINTENANCE OF PUMPS, PIPING, AND VESSELS. IN OCTOBER 1998, WE MODIFIED OUR DTDC TO GIVE US A SECOND SPARGE DECK.

**Goodhue County, City of RED WING -- DAYCO PTI INC. -- ERCID -- 251100010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methylene Chloride</i>	1995	18000							Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W19 TRANSFER OF THIS OPERATION WAS COMPLETED IN 1998.

W89 TRANSFER OF THIS OPERATION WAS COMPLETED IN 1998.

**Non Numeric Objective:** ELIMINATE OPERATION.

**Goodhue County, City of RED WING -- RED WING SHOES CO. - PLANT 1 -- ERCID -- 251100008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1998	15764	18,865	15,764	15,281	13,753	1997 18,865 1998 15,764	1998 / 1997 = 1.12	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Goodhue County, City of RED WING -- RED WING SHOES CO. - PLANT II -- ERCID -- 251100001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1998	12505	18,806	12,505	11,811	8,127	1997 18,806	1998 12,505	1998 / 1997 = 0.98	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Goodhue County, City of RED WING -- S.B. FOOT TANNING -- ERCID -- 251100002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1993	82982	59,448	54,692	50,317	46,292	1997 129,000	1998 92,580	1998 / 1997 = 0.84	No

**Process Code** P31 TANNING

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W42 SUBSTITUTED RAW MATERIALS

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:**

- 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
- F10 SUBSTITUTING WATER BASED FORMULATIONS USING GLYCOL ETHERS AS COSOLVENTS FOR SOLVENT BASED FORMULATIONS. THIS HAS INCREASED OUR USAGE.

**Goodhue County, City of RED WING -- USG INTERIORS, INC. -- ERCID -- 251100009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Carbonyl Sulfide</i>	1996	279272					1997 294,257 1998 282,820	1998 / 1997 = 1.05	Yes

**Process Code** P36 MANUFACTURE OF MINERAL FIBER

Intended Activity

W58 ALTERNATIVES FOR REDUCING CARBONYL SULFIDE WERE INVESTIGATED.

Employed Activity

W58 ALTERNATIVES FOR REDUCING CARBONYL SULFIDE WERE INVESTIGATED.

**Non Numeric Objective:** INVESTIGATE AND COMPLETE EVALUATION OF THE OPTIONS FOR REDUCTION BY 12-1-98. CONDUCT FEASIBILITY STUDY OF USING ALTERNATIVE TECHNOLOGIES, AND BEGIN INVESTIGATING ALTERNATIVE PROCESS METHODS AND POSSIBLE MODIFICATIONS TO POLLUTION CONTROL EQUIPMENT.

**Non Numeric Progress:** EVALUATION OF ALTERNATIVES WAS COMPLETED AND INSTALLATION OF A THERMAL OXIDIZER FOR EXHAUST GASES WAS STARTED.

**Grant County, City of BARRETT -- TWF INDUSTRIES -- ERCID -- 260100004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1993	19891					1997 15,734 1998 15,128	1998 / 1997 = 0.96	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W39 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.

W49 CONTINUE RESEARCHING SUBSTITUTING HIGH VOC SOLVENT WITH POWDER COATING.

W42 SUBSTITUTED RAW MATERIALS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W58 CONTINUE TO INCREASE USE OF THE CONVEYOR AND REDUCE THE AMOUNT OF BATCH PAINTING.

Employed Activity

W49 CONTINUE RESEARCHING SUBSTITUTING HIGH VOC SOLVENT WITH POWDER COATING.

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W58 CONTINUED TO INCREASE USE OF THE CONVEYOR AND REDUCE THE AMOUNT OF BATCH PAINTING.

W42 SUBSTITUTED RAW MATERIALS

W39 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.

**Hennepin County, City of BLOOMINGTON -- CENTURY MANUFACTURING CO. -- ERCID -- 270050112**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1997	10100	10,100	8,700	5,700	5,000	1997 10,100 1998 7,700	1998 / 1997 = 1.2	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W49

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	29350	32,400	12,960	6,000	500	1997 29,350 1998 43,140	1998 / 1997 = 1.2	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W78 COMPLETED EVALUATION AND BEGAN SWITCHING OVER TO POWDER BASED PAINTS.

**Barriers to P2:** F10 POWDER COATING SYSTEM NOT INSTALLED AS EARLY AS EXPECTED.

**Hennepin County, City of BLOOMINGTON -- CHEMREX INC. -- ERCID -- 270050008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1996	6258	6,258	5,945	5,632	5,319	1997 65,249 1998 10,200	1998 / 1997 = 0.7	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W58  
 W35 INSTALLED VAPOR RECOVERY SYSTEMS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1996	10							No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W19  
Employed Activity  
W19

**Non Numeric Objective:** CURRENTLY UTILIZE BEST AVAILABLE TECHNOLOGY TO MINIMIZE RELEASES. FURTHER REDUCTION IS DEPENDANT UPON PRODUCTION OUTPUT.

**Non Numeric Progress:** EMPLOY CONTAINMENT, VENTILATION AND APC DEVICES TO CONTROL AIR EMISSIONS. APC DEVICES ARE GREATER THAN 99.9% EFFICIENT. FURTHER REDUCTION IS A FUNCTION OF PRODUCTION OUTPUT.

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	870	870	866	861	856	1997 7,346		Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 LIQUID RING VACUUM PUMPS AND VACUUM SYSTEM ACCUMULATOR TO IMPROVE CAPTURE OF SOLVENT VAPOR.  
W35 INSTALLED VAPOR RECOVERY SYSTEMS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrogen Fluoride</i>	1995	63					1997 28,822 1998 26,860	1998 / 1997 = 0.95	No

**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W58 LOOK FOR A REPLACEMENT PROCESS THAT IS BOTH ECONOMICALLY FEASIBLE AND PROVIDES LOWER EMISSION RATES.  
**Non Numeric Objective:** INVESTIGATE PROCESSES FOR DUMMY WAFER STRIPPING. THIS PROCESS USES THE HIGHEST CONCENTRATION OF HF AND CONTRIBUTES THE MOST TO OUR RELEASE AMOUNT.  
**Non Numeric Progress:** ALTERNATIVES HAVE BEEN EXPLORED AND NO OTHER MEANS OF DUMMY WAFER STRIPPING HAS BEEN FOUND.  
**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1992	1					1997 79,708 1998 61,834	1998 / 1997 = 0.95	No

**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W58 LOOK FOR A REPLACEMENT PROCESS THAT IS BOTH ECONOMICALLY FEASIBLE AND PROVIDES LOWER EMISSION RATES.  
**Non Numeric Objective:** CHECK WITH EQUIPMENT SUPPLIERS ON NEW PROCESS TECHNOLOGY THAT MAY LEAD TO A CLEANER MEANS OF NITRIDE LAYER REMOVAL.  
**Non Numeric Progress:** CHECK WITH EQUIPMENT SUPPLIERS ON NEW PROCESS TECHNOLOGY. THERE HAVE BEEN NO NEW ADVANCES IN TECHNOLOGY THAT HAVE LED TO A REPLACEMENT PROCESS THAT IS BOTH ECONOMICALLY FEASIBLE AND PROVIDES LOWER EMISSION RATES.  
**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of BLOOMINGTON -- FLAME METALS, PLANT #3 -- ERCID -- 270050080**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tetrachloroethylene</i>	1995	60668	37,732	39,100	35,000	15,000	1997 37,730 1998 39,100	1998 / 1997 = 1.1	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Hennepin County, City of BLOOMINGTON -- PRINTED CIRCUITS, INC. -- ERCID -- 270050007**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1997	9900					1997 7,295 1998 3,633	1998 / 1997 = 0.65	No

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
 Intended Activity W58 REVIEWED CURRENT PROCESS AND LOOK AT WAYS TO REDUCE DRAGOUTS AND CONTAINERS WITH RESIDUAL COMPOUNDS.  
 Employed Activity W58 CHANGED SOME PROCESSES SLIGHTLY AND NOTICED REDUCTION IN TREATMENT CHEMICALS USED.  
**Non Numeric Objective:** INSTITUTE TIGHTER PROCESSING LIMITS TO REDUCE THE AMOUNT GOING TO PRE-TREATMENT. TRY TO REDUCE THE AMOUNT OF SCRAP PRODUCT BEING SENT FOR RECLAMATION.  
**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Hennepin County, City of BLOOMINGTON -- SEAGATE TECHNOLOGY, INC. -- ERCID -- 270050005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1996	19203					1997 25,657 1998 33,139	1998 / 1997 = 1.08	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity W53 USE OF A DIFFERENT PROCESS CATALYST  
 Employed Activity W74 IMPROVED APPLICATION TECHNIQUES  
**Non Numeric Objective:** SEVERAL ALTERNATIVE PRODUCTS HAVE BEEN TESTED BUT THE RESULTS WERE NOT FAVORABLE. PROCESS IMPROVEMENTS HAVE BEEN MADE.  
**Non Numeric Progress:** HAVE REDUCTION EFFORTS FOCUSING ON AN ALTERNATIVE THAT IS SHOWING VERY POSITIVE RESULTS IN THE TESTING STAGE.  
**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-methyl-2-pyrrolidone</i>	1996	295898					1997 536,402 1998 533,722	1998 / 1997 = 1.08	Yes

**Process Code** P30 STRIPPING ANY COATING  
 Intended Activity W53 USE OF A DIFFERENT PROCESS CATALYST  
 Employed Activity W58 CHANGES IN RINSE CYCLES AND BATH LIFE CYCLES HAVE BEEN MADE WHERE POSSIBLE.

**Non Numeric Objective:** PRIMARY EFFORTS HAVE FOCUSED ON ALTERNATIVE CHEMICALS. NONE WAS FOUND WITHOUT POTENTIAL HEALTH RISKS.

**Non Numeric Progress:** SLIGHT PROGRESS HAS BEEN MADE THROUGH PROCESS IMPROVEMENTS.

**Hennepin County, City of BLOOMINGTON -- THERMO KING CORP. -- ERCID -- 270050009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1995	34000					1997 70,003	1998 / 1997 = 2	Yes
							1998 50,003		

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W71 CHANGE CLEANING PROCESS CHEMICAL TO REDUCE AMOUNT OF COPPER RELEASES TO THE POTW. IMPROVE TREATMENT OF WASTEWATER.

**Non Numeric Objective:** WORKING ON ALTERNATIVES TO REDUCE THE AMOUNT RELEASES TO THE POTW.

**Hennepin County, City of BLOOMINGTON -- VTC, INC. -- ERCID -- 270050011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrogen Fluoride</i>	1995	14000	12,000	10,000	14,000	16,000	1997 13,100	1998 / 1997 = 1.12	No
							1998 14,646		

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Intended Activity

W58 POLLUTION PREVENTION ACTIVITIES HAVE CONCENTRATED ON ELIMINATING UNTREATED (NEUTRALIZED) RELEASES FROM THE FACILITY.

Employed Activity

W58 POLLUTION PREVENTION ACTIVITIES HAVE CONCENTRATED ON ELIMINATING UNTREATED (NEUTRALIZED) RELEASES FROM THE FACILITY.

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-methyl-2-pyrrolidone</i>	1995	19755	30,000	40,000	40,000	50,000	1997 36,948	1998 / 1997 = 1.12	No
							1998 43,369		

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W58 PROCESS MODIFICATIONS HAVE CONCENTRATED ON THE PURCHASE AND INSTALLATION OF THE MOST EFFICIENT STRIPPING PROCESS EQUIPMENT USED IN OUR INDUSTRY.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W58 POLLUTION PREVENTION ACTIVITIES HAVE CONCENTRATED ON ELIMINATING UNTREATED (NEUTRALIZED) RELEASES FROM THE FACILITY.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Hennepin County, City of BROOKLYN PARK -- PEARL MANUFACTURING, INC. -- ERCID -- 270150003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Styrene	1993	47500	45,255	149,531	158,100	168,300	1997 45,255	1998 / 1997 = 1.14	No
							1998 149,531		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W49 LOOKING FOR LOWER STYRENE CONTAINING RESINS AND WILL ADOPT THEM WHEN THEY BECOME FINANCIALLY AVAILABLE.  
Employed Activity  
W49 LOOK FOR LOWER STYRENE CONTAINING RESINS AND ADOPT THEM WHEN THEY BECOME FINANCIALLY AVAILABLE.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W74 IMPROVED APPLICATION TECHNIQUES

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Hennepin County, City of BROOKLYN PARK -- TECHNICAL PLATING, INC. -- ERCID -- 270150036**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Trichloroethylene	1993	22080	18,773	16,245	0	0	1997 18,773	1998 / 1997 = 0.87	No
							1998 16,245		

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W58 ELIMINATED THE MAIN SOURCE OF TRICHLOROETHYLENE FROM OUR PROCESS AND SUBSTITUTED ALTERNATIVE MEANS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W58 ELIMINATED THE MAIN SOURCE OF TRICHLOROETHYLENE FROM OUR PROCESS AND SUBSTITUTED ALTERNATIVE MEANS.

**Barriers to P2:** F10 CERTAIN PROCESS ALTERNATIVES ARE NOT YET AVAILABLE WITHOUT SACRIFICING PRODUCT QUALITY.

**Hennepin County, City of BROOKLYN PARK -- THOMAS ENGINEERING CO. -- ERCID -- 270150033**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1991	28601					1997 76,386	1998 / 1997 = 0.98	No
							1998 91,400		

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W81

CHANGED PRODUCT SPECIFICATIONS

Employed Activity

W81

CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** CONTINUE TO WORK FOR BETTER DESIGNS AND NEW TOOLING TO REDUCE THE AMOUNT OF BURR ON OUR PRODUCTS. CONTINUOUSLY LOOKING AT WAYS TO ELIMINATE BURRS ENTIRELY.

**Non Numeric Progress:** DESIGN AND MAINTAIN TOOLING WHICH GENERATES THE BURRS TO MINIMIZE THEIR SIZE AS MUCH AS POSSIBLE. WORK WITH CUSTOMERS TO INCREASE ALLOWABLE BURRS ON THEIR PRODUCTS. 1998 LBS RELEASED WAS 1.

**Barriers to P2:** F10 END PRODUCT IS PRODUCED FROM METALS CONTAINING HAZARDOUS MATERIAL. AS OUR BUSINESS GROWS, SO DOES OUR USAGE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	388015					1997 617,396	1998 / 1997 = 0.98	No
							1998 588,327		

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W81

CHANGED PRODUCT SPECIFICATIONS

Employed Activity

W81

CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** CONTINUE TO WORK FOR BETTER DESIGNS AND NEW TOOLING TO REDUCE THE AMOUNT OF BURR ON OUR PRODUCTS. CONTINUOUSLY LOOKING AT WAYS TO ELIMINATE BURRS ENTIRELY.

**Non Numeric Progress:** DESIGN AND MAINTAIN TOOLING WHICH GENERATES THE BURRS TO MINIMIZE THEIR SIZE AS MUCH AS POSSIBLE. WORK WITH CUSTOMERS TO INCREASE ALLOWABLE BURRS ON THEIR PRODUCTS. 1998 LBS RELEASED WAS 1.

**Barriers to P2:** F10 END PRODUCT IS PRODUCED FROM METALS CONTAINING HAZARDOUS MATERIALS. AS OUR BUSINESS GROWS, SO DOES OUR USAGE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1991	13301					1997 16,765	1998 / 1997 = 0.98	No
							1998 25,648		

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W81

CHANGED PRODUCT SPECIFICATIONS

Employed Activity  
W81

CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:**

CONTINUE TO WORK FOR BETTER DESIGNS AND NEW TOOLING TO REDUCE THE AMOUNT OF BURR ON OUR PRODUCTS. WE ARE ALSO CONTINUOUSLY LOOKING AT WAYS TO ELIMINATE BURRS ENTIRELY.

**Non Numeric Progress:**

DESIGN AND MAINTAIN TOOLING WHICH GENERATES THE BURRS TO MINIMIZE THEIR SIZE AS MUCH AS POSSIBLE. WORK WITH CUSTOMERS TO INCREASE ALLOWABLE BURRS ON THEIR PRODUCTS. 1998 LBS RELEASED WAS 1.

**Barriers to P2:**

F10 END PRODUCT IS PRODUCED FROM METALS CONTAINING HAZARDOUS MATERIALS. AS OUR BUSINESS GROWS, SO DOES OUR USAGE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1991	15230					1997 39,414	1998 / 1997 = 0.98	Yes
							1998 37,591		

**Process Code** P05

CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W61

CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

Employed Activity

W61

CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

**Non Numeric Objective:**

REDUCE OUR USE AS MUCH AND AS QUICKLY AS POSSIBLE. HAVE REPLACED THREE DEGREASING UNITS WITH AQUEOUS UNITS SO FAR.

**Non Numeric Progress:**

ORDERED A NEW AQUEOUS DEGREASER. LOOKING AT ADDITIONAL UNITS.

**Hennepin County, City of EDEN PRAIRIE -- APPLIED COATING TECHNOLOGY, INC. -- ERCID -- 270560004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1998	60390	82	70	72	72	1997 84,820	1998 / 1997 = 0.75	Yes
							1998 60,460		

**Process Code** P19

METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Hennepin County, City of EDEN PRAIRIE -- DOUGLAS CORPORATION -- ERCID -- 270560076**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1997	273100	273,100	208,800	205,000	205,000	1997 273,100 1998 371,200	1998 / 1997 = 1.13	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W71

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1997	15700	15,700	13,000	12,000	12,000	1997 15,800 1998 12,400	1998 / 1997 = 1.13	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W49 WORKING WITH OUR SUPPLIERS FOR BETTER ALTERNATIVES.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 SUPPLIERS ARE NOT ABLE TO MEET REQUIREMENTS USING SAFER PRODUCTS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	61500	61,500	60,100	55,000	55,000	1997 61,500 1998 60,100	1998 / 1997 = 1.13	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W49 WORKING WITH OUR SUPPLIERS FOR SAFER ALTERNATIVES.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Hennepin County, City of EDEN PRAIRIE -- EATON CORP. - HYDRAULICS DIV. -- ERCID -- 270560020**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1996	21827					1997 20,634 1998 23,905	1998 / 1997 = 1	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
W49 IF A NEW MATERIAL BECOMES AVAILABLE WE WILL INVESTIGATE THEM FOR POSSIBLE USE.

Employed Activity  
W58 OUTSIDE CONTRACT MACHINING FOR SELECTED COMPONENTS.

**Non Numeric Objective:** 99% OF THIS WASTE IS RECYCLED. IT WOULD NOT BE FEASIBLE TO ATTEMPT RECOVERY OF THIS SMALL REMAINING AMOUNT THAT MAY BE RELEASED.

**Non Numeric Progress:** 99% OF THIS WASTE IS RECYCLED. IT WOULD NOT BE FEASIBLE TO ATTEMPT RECOVERY OF THIS SMALL REMAINING AMOUNT THAT MAY BE RELEASED.

**Barriers to P2:** F10 INCREASE IN PRODUCTION LEVELS.

**Hennepin County, City of GOLDEN VALLEY -- HONEYWELL -- ERCID -- 270700001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Chromium</i>	1990	12250	309	300	295	290	1997 1998	13,508 14,497	1998 / 1997 = 0.95	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity  
W19 BETTER MANAGEMENT OF MATERIALS

Employed Activity  
W19 BETTER MANAGEMENT OF MATERIALS.

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

Employed Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 WHEN USING A RANGE FOR ESTIMATING SOLID WASTE RELEASES, IT MAKES IT DIFFICULT TO ACHIEVE OUR GOAL WHEN TOTAL VOLUME IS UNDER 1000 POUNDS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Copper</i>	1990	1191197	425	400	390	380	1997 1998	373,985 382,074	1998 / 1997 = 0.95	Yes

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

Employed Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
W19 BETTER MANAGEMENT OF MATERIAL

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead</i>	1990	11250	261	260	255	250	1997 9,732 1998 10,221	1998 / 1997 = 0.95	No

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)  
Intended Activity  
W19 BETTER MANAGEMENT OF MATERIALS.  
Employed Activity  
W19 BETTER MANAGEMENT OF MATERIALS.

**Barriers to P2:**  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 REDUCED OUR POTW DISCHARGE TO 0, BUT WE USE A RANGE FOR ESTIMATING SOLID WASTE RELEASES MAKING IT DIFFICULT TO ACHIEVE OUR GOAL WHEN TOTAL VOLUME IS UNDER 1000 POUNDS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1988	14920	6,921	6,500	6,175	5,866	1997 7,732 1998 7,250	1998 / 1997 = 0.95	Yes

**Process Code** P15 HEAT TREATING  
Intended Activity  
W19 BETTER MANAGEMENT OF MATERIALS.  
Employed Activity  
W19 BETTER MANAGEMENT OF MATERIALS.  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W19 BETTER MANAGEMENT OF MATERIALS  
Employed Activity  
W78 ELIMINATED SOME PAINTING OPERATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1992	7033	280	280	275	270	1997 7,876 1998 8,300	1998 / 1997 = 0.95	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity  
W19 BETTER MANAGEMENT OF MATERIAL  
Employed Activity  
W19 BETTER MANAGEMENT OF MATERIAL.  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W19 BETTER MANAGEMENT OF MATERIAL  
Employed Activity  
W19

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 WHEN USING A RANGE FOR ESTIMATING SOLID WASTE RELEASES, IT MAKES IT DIFFICULT TO ACHIEVE OUR GOAL WHEN TOTAL VOLUME OF RELEASES IS UNDER 1000 POUNDS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1988	60000	4,161	4,000	3,800	3,610	8,689	8,100	1998 / 1997 = 0.95	Yes

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W58 CHANGED PROCESS OF FILLING DEVICES.  
Employed Activity  
W19 BETTER MANAGEMENT OF MATERIAL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Trichloroethylene</i>	1988	235000	28,451	25,000	23,750	22,563	45,043	26,112	1998 / 1997 = 0.95	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
Employed Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1990	31000					1997 35,249 1998 40,484	1998 / 1997 = 1.01	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W75 CHANGED FROM SPRAY TO OTHER SYSTEM

W49 95% OF XYLENE RELEASES ARE AIR EMISSIONS. MINIMAL AMOUNT IS DISPOSED AS WASTE OFF-SITE.

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** EVALUATE THE AVAILABLE OPTIONS RELATIVE TO OPERATIONAL AND BUSINESS NEEDS AND DEMANDS. OUR "PAINT FINISHING GROUP" IS CURRENTLY REVIEWING SEVERAL PAINTING ALTERNATIVES.

**Non Numeric Progress:** ADDITIONAL OPTIONS TO SIGNIFICANTLY REDUCE XYLENE EMISSIONS FROM THE EXISTING PAINT OPERATIONS ARE MINIMAL AT BEST. CHANGING THE PAINTING TECHNOLOGY MUST BE CONSIDERED. OUR "PAINT FINISHING GROUP" IS REVIEWING SEVERAL PAINTING ALTERNATIVES.

**Barriers to P2:** F10 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED.

**Hennepin County, City of HAMEL -- QX, INC. -- ERCID -- 270870008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	4038	4,038	6,897			1997 4,220 1998 7,104	1998 / 1997 = 1.68	Yes

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Hennepin County, City of HOPKINS -- ALLIEDSIGNAL, INC. -- ERCID -- 270950001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991						1997 39,755 1998 35,509	1998 / 1997 = 1.22	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Intended Activity

W19 MAXIMIZING PART DENSITY PER PANEL AND MINIMIZING EXPOSED COPPER ON PANELS TO REDUCE COPPER GENERATION PER PART AS MUCH AS POSSIBLE.

Employed Activity

W19 MAXIMIZING PARTS DENSITY PER PANEL AND MINIMIZING EXPOSED COPPER ON PANEL TO REDUCE COPPER GENERATION PER PART AS MUCH AS POSSIBLE.

**Non Numeric Objective:** CONTINUE TO MAKE EFFICIENT USE OF PRINTED CIRCUIT BOARD PANELS TO REDUCE COPPER GENERATION PER PANEL.

**Non Numeric Progress:** DESIGN ENGINEERS CONTINUE TO MAXIMIZE PART DENSITY PER PANEL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	66391					1997 67,101 1998 137,116	1998 / 1997 = 1.22	No

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W58

INSTALLATION OF ANODIC LINERS IN THE ELECTROLESS NICKEL TANKS.

Employed Activity

W58

INSTALLED ANODIC LINERS IN ELECTROLESS NICKEL TANKS.

**Non Numeric Objective:** MINIMIZES TREATMENT OF NICKEL PLATED TO PROCESS TANKS AND MAXIMIZES THE PART DENSITY ON EACH BOARD.

**Non Numeric Progress:** MINIMIZES TREATMENT OF NICKEL PLATED TO PROCESS TANKS AND MAXIMIZES THE PART DENSITY ON EACH BOARD.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of HOPKINS -- KANGAS ENAMELING -- ERCID -- 270950044**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	800					1997 17,800 1998 13,520	1998 / 1997 = 0.93	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W21

INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

W74

IMPROVED APPLICATION TECHNIQUES

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W89

CHANGED PRODUCT LINE TO MORE CUSTOM PROJECTS THAT INVOLVE MORE MASKING TIME AND LESS COATING TIME.

**Non Numeric Objective:** SPILL AND LEAK PREVENTION, INVENTORY CONTROL, PROCESS MODIFICATIONS AND OPERATOR TRAINING.

**Non Numeric Progress:** MAINTAIN MONTHLY RECORDKEEPING SYSTEM TO TRACK CHEMICAL USE. CONTINUE TO INVESTIGATE PROCESS MODIFICATIONS THAT WOULD REDUCE CHEMICAL USE.

**Hennepin County, City of MAPLE GROVE -- UNIVERSAL CIRCUITS, INC. -- ERCID -- 271150026**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1992	34000					1997 31,008 1998 40,727	1998 / 1997 = 0.96	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W68 IMPROVED RINSE EQUIPMENT OPERATION

Employed Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W68 IMPROVED RINSE EQUIPMENT OPERATION

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Intended Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W19 REPLACED ALUMINUM CHIPS SYSTEM WITH ION EXCHANGE SYSTEM WHICH PRODUCES A WASTE WHICH IS 100% RECYCLABLE.

Employed Activity

W19 REPLACED ALUMINUM CHIPS SYSTEM WITH ION EXCHANGE SYSTEM WHICH PRODUCES A WASTE WHICH IS 100% RECYCLABLE.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** REDUCE THE AMOUNT OF COPPER THAT IS NECESSARY TO PRODUCE AN ACCEPTABLE PRODUCT FOR OUR CUSTOMERS, WHILE MINIMIZING THE AMOUNT OF SCRAP GENERATED. CONTINUE TO RECYCLE ALL WASTES PRODUCED IN AN ENVIRONMENTALLY FRIENDLY FASHION.

**Non Numeric Progress:** REPLACEMENT OF WASTEWATER TREATMENT SYSTEM, REPLACED ETCHING EQUIPMENT, IMPROVE QUALITY YIELDS, REDUCING SCRAP, REDUCING AMOUNT OF COPPER REQUIRED TO COMPLETE ORDERS.

**Hennepin County, City of MAPLE GROVE -- UNIVERSAL PLASTICS, INC. -- ERCID -- 271150028**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
Styrene	1992	2649	3,688	3,087	3,450	3,680	1997	3,688	1998 / 1997 = 0.93	Yes
							1998	3,087		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W74 IMPROVED APPLICATION TECHNIQUES  
W49 TESTING USE OF A FLOWCOAT SYSTEM TO REDUCE EMISSIONS.

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Hennepin County, City of MAPLE GROVE -- ZENITH PRODUCTS CO. -- ERCID -- 271150035**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
Toluene	1993	14871	13,713	25,476	0	0	1997	13,713	1998 / 1997 = 0.85	No
							1998	25,476		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W49 CONTINUE TO RESEARCH ALTERNATIVE PRODUCTS TO REPLACE BURNISHED BLOCK SEALER WITH A PRODUCT THAT DOES NOT CONTAIN TOLUENE.

**Barriers to P2:** F10 A SUBSTITUTION FOR BURNISHED BLOCK SEALER WAS NOT FOUND UNTIL 1999, SO TOLUENE COULD NOT BE REDUCED UNTIL 1999. THERE WILL BE NO TOLUENE AFTER 1998.

**Hennepin County, City of MAPLE PLAIN -- ELECTROCHEMICALS, INC. -- ERCID -- 271200010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1996	781	868	927	913	963	1997 868 1998 927	1998 / 1997 = 0.88	No

**Process Code P02** CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
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  
W24 INSTITUTED BETTER LABELING PROCEDURES  
Employed Activity  
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  
W24 INSTITUTED BETTER LABELING PROCEDURES

**Process Code P03** CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W24 INSTITUTED BETTER LABELING PROCEDURES  
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  
Employed Activity  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Barriers to P2:** 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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-methyl-2-pyrrolidone</i>	1997	758	758	2,127	218	230	1997 758 1998 2,127	1998 / 1997 = 0.81	No

**Process Code P02** CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Employed Activity  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE

Employed Activity  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W24 INSTITUTED BETTER LABELING PROCEDURES

**Barriers to P2:** F10 SENT OFF-SPEC MATERIAL OFF-SITE FOR INCINERATION WHICH REQUIRED US TO FILE A FORM R INSTEAD OF FORM A. IN 1999. WE HOPE TO FILE FORM A.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
Nitric Acid	1996	700	915	786	831	877	1997	915	1998 / 1997 = 1.54	Yes
							1998	787		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Employed Activity  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W24 INSTITUTED BETTER LABELING PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W24 INSTITUTED BETTER LABELING PROCEDURES

Employed Activity  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1996	665	1,283	1,236	196	207	1997 1,283 1998 1,236	1998 / 1997 = 1.47	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W24 INSTITUTED BETTER LABELING PROCEDURES
- 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

Employed Activity

- W24 INSTITUTED BETTER LABELING PROCEDURES
- W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W24 INSTITUTED BETTER LABELING PROCEDURES

Employed Activity

- W24 INSTITUTED BETTER LABELING PROCEDURES
- W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Hennepin County, City of MINNEAPOLIS -- APPLIED COATING TECHNOLOGY, INC. -- ERCID -- 271350104**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1998	28094					1997 47,994 1998 37,537	1998 / 1997 = 0.8	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

- W73 SUBSTITUTED COATING MATERIALS USED

**Non Numeric Objective:** USE IS DICTATED BY CUSTOMER DEMANDS. ANY REDUCTION IS DEPENDENT ON THE TYPES OF ORDERS RECEIVED AND NOT NECESSARILY BY THE FACILITY.

**Non Numeric Progress:** USE IS DICTATED BY CUSTOMER DEMANDS. ANY REDUCTION IS DEPENDENT ON THE TYPES OF ORDERS RECEIVED AND NOT NECESSARILY BY THE FACILITY.

**Barriers to P2:** F10 USE IS DICTATED BY CUSTOMER DEMANDS.

**Hennepin County, City of MINNEAPOLIS -- AVECOR CARDIOVASCULAR, INC. -- ERCID -- 271350545**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1992	86200	18,981	22,000	29,000	29,000	1997 19,697	1998 / 1997 = 1.29	Yes
							1998 24,330		

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Hennepin County, City of MINNEAPOLIS -- DANA CORP.-GRESEN HYDR. DIV. -- ERCID -- 271350540**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1996	5786					1997 6,027	1998 / 1997 = 1.04	No
							1998 6,300		

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** INVESTIGATE FEASIBILITY OF MATERIAL SUBSTITUTION.

**Non Numeric Progress:** CONTINUING IN THE INVESTIGATIVE STAGE.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1996	9497					1997 9,893	1998 / 1997 = 1.04	No
							1998 10,300		

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** INVESTIGATE FEASIBILITY OF MATERIAL SUBSTITUTION.

**Non Numeric Progress:** CONTINUING IN THE INVESTIGATIVE STAGE.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of MINNEAPOLIS -- DAVIS-FROST, INC. -- ERCID -- 271350098**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
1,2,4-trimethylbenzene	1997	797	797	321	321	321	1997	797	1998 / 1997 = 0.96	Yes
							1998	321		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Employed Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W39 TRAINED MATERIAL HANDLERS.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
Dicyclopentadiene	1995	11025	2,932	1,441	1,441	1,441	1997	2,932	1998 / 1997 = 0.96	Yes
							1998	1,441		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W39 REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Employed Activity

- W39 TRAINED MATERIAL HANDLERS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W39 TRAINED MATERIAL HANDLERS.  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1997	1345	7,338	11,463	11,463	11,463	1997 7,338 1998 11,463	1998 / 1997 = 0.96	Yes

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W39 TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W39 TRAINED MATERIAL HANDLERS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1993	1222	1,025	1,579	1,579	1,579	1997 1,025 1998 1,579	1998 / 1997 = 0.96	No

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W39 REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS..

Employed Activity

W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W39 TRAINED MATERIAL HANDLERS.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:** F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE  
F10 SOURCE REDUCTION AND/OR REPLACEMENT IS NOT FEASIBLE DUE TO THE NATURE OF THE REQUIRED PRODUCT. A LACK OF MATERIALS EXCHANGE OPTIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Isobutyl Ketone</i>	1997	553	1,774	6,270	6,270	6,270	1997 1,774	1998 6,270	1998 / 1997 = 0.96	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W39 TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W39 TRAINED MATERIAL HANDLERS.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE  
F10 SOURCE REDUCTION AND/OR REPLACEMENT IS NOT FEASIBLE DUE TO THE NATURE OF THE REQUIRED PRODUCT. A LACK OF MATERIALS EXCHANGE OPTIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1993	6363	7,664	28,916	28,916	28,916	1997 7,664	1998 28,916	1998 / 1997 = 0.96	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS..
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W39 TRAINED MATERIAL HANDLERS.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1993	10430	33,916	52,385	52,385	52,385	1997 1998	33,916 52,385	1998 / 1997 = 0.96	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W39 TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W39 TRAINED MATERIAL HANDLERS.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Hennepin County, City of MINNEAPOLIS -- DIAMOND VOGEL-NORTH, INC. -- ERCID -- 271350079**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Methyl Ethyl Ketone</i>	1998	19103	40,000	37,500	35,000	32,500	1998	19,787	1998 / 1997 = 0	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W89 REFORMULATE PRODUCTS TO REDUCE MEK AND OTHER HAPS. CHANGING FORMULATION TO MEET THE NEW EPA AIM/VOC RULES.
- W58 REFORMULATE PRODUCTS TO REDUCE MEK AND OTHER HAPS. CHANGING FORMULATION TO MEET THE NEW EPA AIM/VOC RULES.

Employed Activity

- W89 REFORMULATE PRODUCTS TO REDUCE MEK AND OTHER HAPS. CHANGING FORMULATION TO MEET THE NEW EPA AIM/VOC RULES.
- W58 REFORMULATE PRODUCTS TO REDUCE MEK AND OTHER HAPS. CHANGING FORMULATION TO MEET THE NEW EPA AIM/VOC RULES.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1998	610	1,500	1,250	1,000	950	1997 837 1998 610	1998 / 1997 = 0.73	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
 Employed Activity  
 W58  
 W89

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1998	19247	300	250	200	200	1997 16,799 1998 19,247	1998 / 1997 = 0.94	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W89

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluenediisocyanate (mixed isomers)</i>	1998	4282	10	4,282	4,000	4,000	1998 4,282	1998 / 1997 = 0	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Barriers to P2:**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1998	103480	130,000	125,000	120,000	119,500	1997 103,821 1998 103,480	1998 / 1997 = 0.85	No
<b>Process Code</b> P03	CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)								
Employed Activity	W71								
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity	W82								
	W14								
Employed Activity	W89								
	W39								
	W42								

**Barriers to P2:**

**Hennepin County, City of MINNEAPOLIS -- ELECTRIC MACHINERY -- ERCID -- 271350109**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1989	15000	1,000	1,000	1,000	1,000	1998 12,460	1998 / 1997 = 1.2	Yes
<b>Process Code</b> P05	CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)								
Intended Activity	W61								
	W81								
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity	W61								
	W81								

**Hennepin County, City of MINNEAPOLIS -- GLOBE TOOL & MFG. CO. -- ERCID -- 271350187**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1995	40000					1997 41,295 1998 16,104	1998 / 1997 = 1.1	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Employed Activity  
W71 DECOMMISSIONED OLD DEGREASER.

**Hennepin County, City of MINNEAPOLIS -- GRACO, INC. -- ERCID -- 271350027**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1995	40000	25,000	26,000	26,000	26,000	1997 25,103	1998 / 1997 = 0.98	Yes
							1998 26,200		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Hennepin County, City of MINNEAPOLIS -- HARD CHROME, INC. -- ERCID -- 271350029**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1997	258					1997 606	1998 / 1997 = 1	Yes
							1998 420		

**Process Code** P10 ELECTROPLATING  
Employed Activity  
W58 INSTALLED A SOPHISTICATED IN-HOUSE WASTE TREATMENT SYSTEM THAT HAS REDUCED THE AMOUNT OF WASTE RELEASED TO THE EXTENT POSSIBLE.

**Non Numeric Objective:** COMMITMENT WAS MADE TO REDUCE THE RELEASE AND OR TRANSFER OF THIS CHEMICAL TO THE MAXIMUM EXTENT POSSIBLE BY INSTALLING A NEW WASTE HANDLING SYSTEM. THE DEGREE OF REDUCTION WAS DIFFICULT TO PREDICT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1992	2018	1,500	1,500	1,500	1,000	1997 2,042	1998 / 1997 = 1	Yes
							1998 17,700		

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W58 INSTALLED A SOPHISTICATED IN-HOUSE WASTE TREATMENT SYSTEM WHICH CUT IN HALF THE VOLUME OF CYANIDE WASTE SENT OFF-SITE IN 1997.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1993	5000					1997 15,840 1998 16,830	1998 / 1997 = 1	No

**Process Code** P10 ELECTROPLATING

Employed Activity  
W58

INSTALLED A SOPHISTICATED IN-HOUSE WASTE TREATMENT SYSTEM THAT HAS REDUCED THE AMOUNT OF WASTE RELEASED TO THE EXTENT POSSIBLE.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1997	102					1997 2,592 1998 1,316	1998 / 1997 = 1	No

**Process Code** P10 ELECTROPLATING

Employed Activity  
W58

INSTALLED A SOPHISTICATED IN-HOUSE WASTE TREATMENT SYSTEM THAT HAS REDUCED THE AMOUNT OF WASTE RELEASED TO THE EXTENT POSSIBLE.

**Non Numeric Objective:** NO FURTHER REDUCTION IS POSSIBLE.

**Non Numeric Progress:** INSTALLED A SOPHISTICATED IN-HOUSE WASTE TREATMENT SYSTEM THAT HAS REDUCED THE AMOUNT OF WASTE RELEASED TO THE EXTENT POSSIBLE.

**Barriers to P2:**

**Hennepin County, City of MINNEAPOLIS -- HAWKINS CHEMICAL, INC. -- ERCID -- 271350030**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1997	15					1997 15 1998 45	1998 / 1997 = 1.92	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity  
W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** MOST RELEASES ARE FUGITIVE IN NATURE FROM PIPING CONNECTIONS. WILL CONTINUE TO EVALUATE ALTERNATE FORMS OF DRUM FILLING.

**Non Numeric Progress:** MOST RELEASES ARE FUGITIVE IN NATURE FROM PIPING CONNECTIONS. WILL CONTINUE TO EVALUATE ALTERNATE FORMS OF DRUM FILLING.

**Barriers to P2:**

- F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE
- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	2851	2,851	2,850	2,850	2,850	1997 2,851 1998 4,687	1998 / 1997 = 1.64	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1997	7					1997 3,062 1998 7,854	1998 / 1997 = 2.55	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** INCREASED USAGE OF THIS PRODUCT BY OVER TWO TIMES, BUT HAVE BEEN ABLE TO REDUCE POINT EMISSIONS DUE TO USE OF SCRUBBERS. WILL CONTINUE TO EVALUATE OTHER MEANS OF CAPTURING FUGITIVE EMISSIONS.

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

**Hennepin County, City of MINNEAPOLIS -- HONEYWELL - MILITARY AVIONICS DIV. -- ERCID -- 271350033**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1990	22443	15,000	15,000	15,000	15,000	1997 15,276 1998 12,420	1998 / 1997 = 0.96	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W71 IMPROVED/INCREASED MAINTENANCE TO ENSURE COOLING COILS ARE OPERATING EFFICIENTLY. AUTOMATED PARTS HANDLING, REDUCE ROOM DRAFT, 100% FREEBOARD, AND UTILIZE DWELL TIME.  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 Employed Activity  
 W71 IMPROVED/INCREASED MAINTENANCE TO ENSURE COOLING COILS ARE OPERATING EFFICIENTLY. AUTOMATED PARTS HANDLING, REDUCE ROOM DRAFT, 100% FREEBOARD, AND UTILIZE DWELL TIME.

W64 IMPROVED DRAINING PROCEDURES  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

**Hennepin County, City of MINNEAPOLIS -- ILLBRUCK, INC. -- ERCID -- 271350288**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	20254					1997 18,873 1998 19,456	1998 / 1997 = 1.1	No

**Process Code P05** CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W64 IMPROVED DRAINING PROCEDURES

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

Employed Activity

W64 IMPROVED DRAINING PROCEDURES

**Process Code P16** LAMINATING/PRESSING ANY MATERIAL

Intended Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

W49 SUCCESSFULLY USING ADHESIVES WITH A HIGHER PERCENTAGE OF SOLIDS THUS REDUCING THE VOC'S.

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W49 SUCCESSFULLY USING ADHESIVES WITH A HIGHER PERCENTAGE OF SOLIDS THUS REDUCING THE VOC'S.

W42 SUBSTITUTED RAW MATERIALS

**Process Code P21** ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W49 SUCCESSFULLY USING ADHESIVES WITH A HIGHER PERCENTAGE OF SOLIDS THUS REDUCING THE VOC'S.

W81 CHANGED PRODUCT SPECIFICATIONS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

W49 SUCCESSFULLY USING ADHESIVES WITH A HIGHER PERCENTAGE OF SOLIDS THUS REDUCING THE VOC'S.

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Hennepin County, City of MINNEAPOLIS -- INTERPLASTIC CORP. -- ERCID -- 271350108**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dicyclopentadiene</i>	1991	255					1997 7,938 1998 9,613	1998 / 1997 = 0.98	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W19 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

Employed Activity

- W19 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W19 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

Employed Activity

- W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W19 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES. USE OF GOOD OPERATING PRACTICES. CONTINUE VENTING OF THINNING AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER. SECOND THERMAL OXIDIZER TO BECOME OPERATIONAL.

**Non Numeric Progress:** CONTINUED VENTING OF KETTLES AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER. CONTINUED USE OF GOOD OPERATING PRACTICES. MADE SIGNIFICANT PROGRESS ON FUME LINE REPLACEMENT AND DUAL BLOWER SYSTEM TO EXISTING OXIDIZER.

**Barriers to P2:** F10 TECHNOLOGICAL COMPLICATIONS TO CONTROL PARTICULATE EMISSIONS FOR VOC MIXING EMISSIONS. DELAYS IN COMPLETING THE DUAL BLOWER SYSTEM TO THE EXISTING OXIDIZER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1991	5					1997 1,631 1998 2,434	1998 / 1997 = 0.98	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W39 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** CONTINUE USE OF GOOD OPERATING PRACTICES, VENTING OF KETTLE EMISSIONS TO THE THERMAL OXIDIZER. A SECOND THERMAL OXIDIZER FOR EMISSION DESTRUCTION TO BE INSTALLED RELATED TO A SOIL VAPOR EXTRACTION PROJECT. INSTALL LOCKING CAPS ON UNLOADING LINES.

**Non Numeric Progress:** INVESTIGATED AND MADE SIGNIFICANT PROGRESS TOWARD COMPLETING THE INSTALLATION OF FUME LINE REPLACEMENT AND DUAL BLOWER SYSTEM TO EXISTING THERMAL OXIDIZER AND INVESTIGATED AND BEGAN INSTALLATION OF SVE OXIDIZER FOR SOIL VAPOR EXTRACTION PROJECT.

**Barriers to P2:** F10 COMPUTER PROGRAMMING ISSUES DELAYED PROGRESS OF COMPLETING THE DUAL BLOWER SYSTEM TO THE EXISTING OXIDIZER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Maleic Anhydride</i>	1991	255					1997 15,785	1998 / 1997 = 0.98	No
							1998 21,423		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W39

CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

W39

IMPROVED CONTAINMENT FOR ABOVEGROUND STORAGE TANK.

**Non Numeric Objective:** CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES. USE OF GOOD OPERATING PRACTICES. CONTINUE VENTING OF THINNING AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER. SECOND THERMAL OXIDIZER TO BECOME OPERATIONAL.

**Non Numeric Progress:** INSTALLED A REPLACEMENT ABOVEGROUND STORAGE TANK WITH CONTAINMENT (DOUBLE WALLED TANK).

**Barriers to P2:** F10 COMPUTER PROGRAMMING ISSUES DELAYED PROGRESS OF COMPLETING THE DUAL BLOWER SYSTEM TO THE EXISTING OXIDIZER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phthalic Anhydride</i>	1991	2243					1997 6,435	1998 / 1997 = 0.98	Yes
							1998 6,493		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W39

CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

W39

CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

**Non Numeric Objective:** CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES. USE OF GOOD OPERATING PRACTICES. CONTINUE VENTING OF THINNING AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER. SECOND THERMAL OXIDIZER TO BECOME OPERATIONAL.

**Non Numeric Progress:** POLLUTION CONTROL OPTIONS CONTINUED TO BE EVALUATED. NONE HAVE BEEN FOUND TO BE ECONOMICAL, PRACTICAL OR TECHNOLOGICALLY FEASIBLE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1991	30730					1997 92,042	1998 / 1997 = 0.98	No
							1998 355,122		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

W39 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W19 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

Employed Activity

W19 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.  
W39 CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATED POLLUTION CONTROL ALTERNATIVES.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Process Code P03** CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W19 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W39 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.

Employed Activity

W39 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.  
W19 INTENDED TO COMPLETE VAPOR RECOVERY SYSTEM FOR ALL MIXING OPERATIONS. CONTINUE USE OF GOOD OPERATING PRACTICES AND EVALUATION OF POLLUTION CONTROL ALTERNATIVES.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES. USE OF GOOD OPERATING PRACTICES. CONTINUE VENTING OF THINNING AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER. SECOND THERMAL OXIDIZER TO BECOME OPERATIONAL.

**Non Numeric Progress:** VENTING OF THINNING AND UNDERGROUND STORAGE EMISSIONS TO THE THERMAL OXIDIZER, GOOD OPERATING PRACTICES, MADE SIGNIFICANT PROGRESS ON FUME LINE REPLACEMENT AND DUAL BLOWER SYSTEM TO EXISTING OXIDIZER.

**Barriers to P2:** F10 TECHNOLOGICAL COMPLICATIONS TO CONTROL PARTICULATE EMISSIONS FOR VOC MIXING EMISSIONS. DELAYS IN COMPLETING THE DUAL BLOWER SYSTEM TO THE EXISTING OXIDIZER.

**Hennepin County, City of MINNEAPOLIS -- KAPAK CORPORATION -- ERCID -- 271350499**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Methyl Ethyl Ketone	1994	2793					1997	23,259	1998 / 1997 = 1.1
							1998	13,613	

**Process Code P16** LAMINATING/PRESSING ANY MATERIAL

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W19 SEE NON-NUMERIC OBJECTIVE

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** CONTINUE TO SCHEDULE JOBS TO MINIMIZE GENERATION OF WASTE AND REDUCE AMOUNT OF CLEANING NEEDED BETWEEN BATCHES. CONTINUE TO WORK WITH ADHESIVE VENDOR TO REDUCE COATING WEIGHT OF ADHESIVE NEEDED IN LAMINATING.

**Non Numeric Progress:** CONTINUE TO SCHEDULE JOBS TO MINIMIZE GENERATION OF WASTE AND REDUCE AMOUNT OF CLEANING NEEDED BETWEEN BATCHES. CONTINUE TO WORK WITH ADHESIVE VENDOR TO REDUCE COATING WEIGHT OF ADHESIVE NEEDED IN LAMINATING.

**Hennepin County, City of MINNEAPOLIS -- LE JEUNE STEEL CO. -- ERCID -- 271350226**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1993	20934					1997 8,023	1998 / 1997 = 1.44	Yes
							1998 8,212		

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W58 SUBSTITUTED BOLTED CONNECTIONS FOR WELDED JOINTS WHENEVER POSSIBLE. IMPLEMENTED AN INVENTORY PROCESSING SYSTEM TO IMPROVE THE EFFICIENCY OF CUTTING STEEL.

W29 SUBSTITUTED BOLTED CONNECTIONS FOR WELDED JOINTS WHENEVER POSSIBLE. IMPLEMENTED AN INVENTORY PROCESSING SYSTEM TO IMPROVE THE EFFICIENCY OF CUTTING STEEL.

**Non Numeric Objective:** POLLUTION PREVENTION TEAM MEETS SEMI-ANNUALLY. STEEL ALLOY MIXES ARE SPECIFIED BY CUSTOMERS MAKING SUBSTITUTIONS NOT AN OPTION. USE BOLTED CONNECTIONS INSTEAD OF WELDED JOINTS. IMPLEMENT INVENTORY PROCESSING SYSTEM TO IMPROVE EFFICIENCY.

**Non Numeric Progress:** POLLUTION PREVENTION TEAM MEETS SEMI-ANNUALLY. STEEL ALLOY MIXES ARE SPECIFIED BY CUSTOMERS MAKING SUBSTITUTIONS NOT AN OPTION. USE BOLTED CONNECTIONS INSTEAD OF WELDED JOINTS. IMPLEMENT INVENTORY PROCESSING SYSTEM TO IMPROVE EFFICIENCY.

**Hennepin County, City of MINNEAPOLIS -- MARIGOLD FOODS, INC. MINNEAPOLIS PLANT -- ERCID -- 271350040**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1994	13500					1997 13,806	1998 / 1997 = 1	No
							1998 12,599		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

Employed Activity

W68 IMPROVED RINSE EQUIPMENT OPERATION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1994	12000					1998 11,234	1998 / 1997 = 1	No

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P05      CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W59                      MODIFIED STRIPPING / CLEANING EQUIPMENT  
Employed Activity  
W68                      IMPROVED RINSE EQUIPMENT OPERATION

**Barriers to P2:**            F04    CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Hennepin County, City of MINNEAPOLIS -- MENTOR MINNESOTA OPERATIONS -- ERCID -- 271350516**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	15200					1997    11,309 1998    11,470	1998 / 1997 = 1.01	Yes

**Process Code** P21      ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W19                      TRAIN OPERATORS TO MORE ACCURATELY BATCH MATERIALS TO REDUCE WASTE AND REPLACE COVERS WHEN ADDING MATERIALS TO REDUCE EVAPORATIVE LOSSES.  
W74                      IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W19                      TRAIN OPERATORS TO MORE ACCURATELY BATCH MATERIALS TO REDUCE WASTE AND REPLACE COVERS WHEN ADDING MATERIALS TO REDUCE EVAPORATIVE LOSSES.

**Hennepin County, City of MINNEAPOLIS -- METALLURGICAL, INC. -- ERCID -- 271350107**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1992	23000	26,730	26,463	26,199	25,937	1997    32,000 1998    36,100	1998 / 1997 = 1.2	No

**Process Code** P15      HEAT TREATING  
Intended Activity  
W13                      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13                      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**            F05    TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of MINNEAPOLIS -- NICO PRODUCTS, INC. -- ERCID -- 271350052**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1991	10800	5,244	5,381	5,400	3,100	1997 5,244 1998 5,381	1998 / 1997 = 1.15	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W19  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W19  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1997	2477	2,477	2,436	2,500	2,500	1997 2,477 1998 2,463	1998 / 1997 = 1.15	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	10300	5,505	5,536	5,400	5,200	1997 5,505 1998 5,536	1998 / 1997 = 1.15	Yes

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W19 PICKLING OF ALUMINUM  
 Employed Activity  
 W19 IMPROVED ANALYTICAL CONTROLS AND LESS STRIPPING  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
 Intended Activity  
 W19 PICKLING OF ALUMINUM  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W19 IMPROVED ANALYTICAL CONTROLS AND LESS STRIPPING.  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P30 STRIPPING ANY COATING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W42 SUBSTITUTED RAW MATERIALS  
 W19 PICKLING OF ALUMINUM.  
 Employed Activity  
 W19 IMPROVED ANALYTICAL CONTROLS AND LESS STRIPPING.  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1991	28700	50,488	42,164	38,000	36,000	1997 50,488 1998 42,167	1998 / 1997 = 1.1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 W19 NESHAP REQUIREMENTS INCLUDED ADDITIONAL TRAINING OF OPERATORS ON EFFICIENT USE AND MAINTENANCE OF THE DEGREASER.  
 Employed Activity  
 W71 A NEW DEGREASING UNIT WAS ACTIVATED 8/1/98 TO REPLACE OLD UNIT TO COMPLY WITH NESHAP.  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 W19 NESHAP REQUIREMENTS INCLUDED ADDITIONAL TRAINING OF OPERATORS ON EFFICIENT USE AND MAINTENANCE OF THE DEGREASER.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Zinc Compounds</i>	1997	45881	45,881	45,876	46,400	46,400	1997 45,881 1998 46,041	1998 / 1997 = 1.15	Yes	

- Process Code** P10 ELECTROPLATING
  - Intended Activity
    - W19
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
  - Employed Activity
    - W19
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)
  - Intended Activity
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
    - W49
  - Employed Activity
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
    - W49
- Process Code** P30 STRIPPING ANY COATING
  - Intended Activity
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
    - W19
  - Employed Activity
    - W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
    - W19

**Hennepin County, City of MINNEAPOLIS -- PECHINEY PLASTIC PACKAGING, INC -- ERCID -- 271350003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Ethyl Ketone</i>	1988	142000					1997 128,157 1998 132,000	1998 / 1997 = 1.02	No	

- Process Code** P16 LAMINATING/PRESSING ANY MATERIAL
  - Intended Activity
    - W73 SUBSTITUTED COATING MATERIALS USED
    - W42 SUBSTITUTED RAW MATERIALS
    - W81 CHANGED PRODUCT SPECIFICATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W42 SUBSTITUTED RAW MATERIALS  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1988	226000					1997 114,898 1998 116,000	1998 / 1997 = 1.02	Yes

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W73 SUBSTITUTED COATING MATERIALS USED  
W81 CHANGED PRODUCT SPECIFICATIONS  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
W42 SUBSTITUTED RAW MATERIALS

**Hennepin County, City of MINNEAPOLIS -- PERMATITE MANUFACTURING -- ERCID -- 271350517**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1997	797	797	1,585	1,585	1,585	1997 797	1998 1,585	1998 / 1997 = 1.12	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W19 CONTINUED EMPLOYEE TRAINING.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W19 CONTINUED EMPLOYEE TRAINING.
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

- Barriers to P2:**
- F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES
  - F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION
  - F10

**Hennepin County, City of MINNEAPOLIS -- PIONEER METAL FINISHING -- ERCID -- 271350092**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitrate Compounds (water dissociable)</i>	1997	465000	4,200	5,000	4,000	4,000				Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity

- W66 MODIFIED OR INSTALLED RINSE SYSTEMS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

Employed Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Phosphoric Acid</i>	1997	160295	4,106	4,133	4,000	4,000	1997 150,295	1998 150,424	1998 / 1997 = 1.05	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
 Intended Activity  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 Employed Activity  
 W19 35% PHOSPHORIC RINSE IS UTILIZED FOR CLEAN UP OF MORE PARTS.  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

**Hennepin County, City of MINNEAPOLIS -- RITRAMA DURAMARK -- ERCID -- 271350224**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1997	30000					1997 30,000	1998 / 1997 = 1	Yes
							1998 28,543		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	213000					1997 158,000	1998 / 1997 = 1	Yes
							1998 124,801		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Hennepin County, City of MINNEAPOLIS -- SUPERIOR PLATING, INC. -- ERCID -- 271350069**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1988	2940					1997 35,700 1998 34,741	1998 / 1997 = 0.93	No

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W89 USE A PRODUCT THAT HAS A LONGER LIFE.

**Non Numeric Objective:** USE OF WETTING AGENTS FOR DECORATIVE AND HARD CHROME PLATING BATHS. A NEW WET SCRUBBER WAS INSTALLED IN 1996. USE OF BETTER PRODUCT- NEW PRODUCT WITH LONGER LIFE.

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 LIMITED BY CUSTOMER DEMANDS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1988	1618					1997 51,197 1998 50,000	1998 / 1997 = 0.93	No

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W89 INSTALLED NEW ALKALINE ZINC PLATING BATH 8/98

**Non Numeric Objective:** TREAT LESS ON-SITE IN 1998 THAN 1997.

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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1988	500					1997 77,619 1998 56,171	1998 / 1997 = 0.93	No

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** YET TO FIND ANY MATERIAL TO USE AS A SUBSTITUTE OR ALTERNATIVE WHICH WOULD MATCH THE COST AND/OR BE LESS HAZARDOUS.

**Non Numeric Progress:** A SUBSTITUTE PRODUCT THAT IS LESS HAZARDOUS WORKED WELL BUT THE COST WAS THREE TIMES AS HIGH. IF A CUSTOMER REQUESTS THE SUBSTITUTE, WE WILL SUPPLY IT.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of MINNEAPOLIS -- THE BUREAU ELECTRONICS GROUP -- ERCID -- 271350011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1990						1997 14,800 1998 12,600	1998 / 1997 = 0.71	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W89 SWITCHED TO PATTERN PLATE COPPER.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** USE .15 POUNDS PER BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD PRODUCED.

**Non Numeric Progress:** USED .009 POUNDS PER BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD. THIS IS BELOW OUR GOAL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1990								No

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W89 REPLACE CHLORINE WITH SODIUM CHLORATE.  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** USE .06 POUNDS TO ETCH ONE BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD PRODUCED.

**Non Numeric Progress:** USED .0788 POUNDS PER BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD.

**Barriers to P2:** F10 PRODUCT MIX - HEAVIER COPPER REQUIRED BY CUSTOMERS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1990						1997 22,200 1998 20,600	1998 / 1997 = 0.71	No

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W58 GOAL WAS TO USE .011 AND WE USED .0156 SLIGHTLY ABOVE OUR GOAL.

**Non Numeric Objective:** USE .011 POUNDS PER BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD PRODUCED.

**Non Numeric Progress:** USE .011 POUNDS PER BOARD SQUARE FOOT OF PRINTED CIRCUIT BOARD. WE USED .0156, SLIGHTLY ABOVE OUR GOAL.

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 TRIED A SUBSTITUTE AND IT FAILED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1990						1997 36,225	1998 / 1997 = 0.71	Yes
							1998 25,225		

**Process Code** P10 ELECTROPLATING

Intended Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W58 RACK STRIPPING IS FULLY AUTOMATED. NO MORE HAND STRIPPING. BETTER CONTROL.

**Non Numeric Objective:** MAINTAIN USE AT .03 POUNDS PER SQUARE FOOT OF PRINTED CIRCUIT BOARD PRODUCED.

**Non Numeric Progress:** USED .02 POUNDS PER SQUARE FOOT OF PRINTED CIRCUIT BOARD PRODUCED.

**Hennepin County, City of MINNEAPOLIS -- TWIN CITY PLATING -- ERCID -- 271350251**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1994	60					1997 5,579	1998 / 1997 = 0.97	No
							1998 4,608		

**Process Code** P10 ELECTROPLATING

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUE TO EVALUATE ALL ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of MINNEAPOLIS -- UNIVERSAL PLATING & RUSTPROOFING -- ERCID -- 271350073**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1996	2898	3,613	3,768	3,950	4,143	1997 3,034 1998 3,768	1998 / 1997 = 1	No

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W58 BETTER CONTROL OF PLATING PROCESS TO EXTEND LIFE OF BATHS.  
 W64 IMPROVED DRAINING PROCEDURES  
 Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W58 BETTER CONTROL OF PLATING PROCESS TO EXTEND LIFE OF BATHS

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F06 SPECIFIC REGULATORY / PERMIT BURDENS

**Hennepin County, City of MINNEAPOLIS -- ZALK STEEL & SUPPLY CO. -- ERCID -- 271350078**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1991	19400	759	663	663	663	1997 759 1998 663	1998 / 1997 = 0.98	Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
 Intended Activity  
 W58 CONTINUE TO IMPLEMENT A DECREASE IN ZINC OXIDE (IF POSSIBLE) AS A PERCENTAGE OF TONS PROCESSED BY CLEANER ACID. CONTINUE USE OF ASH BOX TO DECREASE TOTAL ASH ACCUMULATION.  
 W49 CONTINUE TO IMPLEMENT RELEASES BEING DEPENDENT ON OFF-SITE FLUCTUATE WHICH IS HOW MUCH RAW MATERIAL THE COMPANY WHICH 'CLEANS' THE ACID CAN PROCESS AT ONE TIME.  
 Employed Activity  
 W58 CONTINUED TO IMPLEMENT A DECREASE IN ZINC OXIDE (IF POSSIBLE) AS A PERCENTAGE OF TONS PROCESSED BY CLEANER ACID. CONTINUED USE OF ASH BOX TO DECREASE TOTAL ASH ACCUMULATION.  
 W49 CONTINUED TO IMPLEMENT RELEASES BEING DEPENDENT ON OFF-SITE FLUCTUATE WHICH IS HOW MUCH RAW MATERIAL THE COMPANY WHICH 'CLEANS' THE ACID CAN PROCESS AT ONE TIME.

**Hennepin County, City of MINNETONKA -- ADVANCED FLEX INC. #1 -- ERCID -- 271400001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	106200	116,000	114,900	0	0	1997 35,400 1998 31,145	1998 / 1997 = 1.12	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W19 CONSOLIDATED FACILITIES, INCREASED PRODUCT VOLUME AND EFFICIENCIES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1994	28000	26,900	25,550	0	0	1997 118,530 1998 115,626	1998 / 1997 = 1.12	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W58 USE OF COPPER BALLS RATHER THAN SLAB ANODES IN PLATING.  
Employed Activity  
W58 USE OF COPPER BALLS RATHER THAN SLAB ANODES IN PLATING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	10800	10,800	13,500	13,500	0	1997 10,800 1998 13,430	1998 / 1997 = 1.12	No

**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W58 CHANGED TO STRIPPER WITH LESS NITRIC ACID.  
Employed Activity  
W58 CHANGED TO STRIPPER WITH LESS NITRIC ACID.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Hennepin County, City of MINNETONKA -- ALLIEDSIGNAL INC. -- ERCID -- 271400008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	154687					1997 254,771 1998 269,444	1998 / 1997 = 1.16	No

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W58 IMPROVE PROCESS YIELD BASED ON PANEL COUNT FROM 73% TO 95%, WHICH SHOULD REDUCE THE TOTAL AMOUNT OF WASTE COPPER.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W58 TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAKTHROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity

W58 IMPROVE PROCESS YIELD BASED ON PANEL COUNT FROM 73% TO 95%, WHICH SHOULD REDUCE THE TOTAL AMOUNT OF WASTE COPPER.

Employed Activity

W58 TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAKTHROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Process Code** P10 ELECTROPLATING

Intended Activity

W58 IMPROVE PROCESS YIELD BASED ON PANEL COUNT FROM 73% TO 95%, WHICH SHOULD REDUCE THE TOTAL AMOUNT OF WASTE COPPER.

Employed Activity

W58 TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAKTHROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Non Numeric Objective:** COPPER PLATING AND ETCHING ARE KEY FUNCTIONS IN CIRCUIT BOARD MANUFACTURING. WE MAXIMIZE THE PART DENSITY ON EACH BOARD.

**Non Numeric Progress:** TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAK THROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1996	10645					1997 10,528	1998 / 1997 = 1.16	No
							1998 11,991		

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity

W58 IMPROVE PROCESS YIELD BASED ON PANEL COUNT FROM 7000 PPM DEFECTS TO 5000 PPM WHICH SHOULD REDUCE THE TOTAL AMOUNT OF WASTE FORMALDEHYDE.

Employed Activity

W58 TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAKTHROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Non Numeric Objective:** ELECTROLESS COPPER IS A KEY FUNCTION IN CIRCUIT BOARD MANUFACTURING. ELECTROLESS COPPER IS MADE UP OF MANY CHEMICALS INCLUDING FORMALDEHYDE.

**Non Numeric Progress:** TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGICAL BREAK THROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1996	14685					1997 17,456	1998 / 1997 = 1.16	No
							1998 26,030		

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W58 IMPROVE PROCESS YIELD BASED ON PANEL COUNT FROM 73% TO 95%, WHICH SHOULD REDUCE THE TOTAL AMOUNT OF NITRIC ACID USED.

Employed Activity

W58 TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGY BREAKTHROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Non Numeric Objective:** NITRIC SOLDER STRIP IS A KEY FUNCTION IN CIRCUIT BOARD MANUFACTURING. WE MAXIMIZE THE PART DENSITY ON EACH BOARD.

**Non Numeric Progress:** THE TECHNOLOGY FOR MAKING CIRCUIT BOARDS ARE INDUSTRIAL STANDARDS. A TECHNOLOGICAL BREAK THROUGH WOULD BE REQUIRED TO ACHIEVE SOME REDUCTION TO PRESENT PRODUCTION VOLUMES.

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Hennepin County, City of MINNETONKA -- HOLADAY CIRCUITS, INC. -- ERCID -- 271400010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1996	26000	28,110	23,169	26,000	26,000	1997 28,875	1998 / 1997 = 1.02	Yes
							1998 23,934		

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Intended Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W66 MODIFIED OR INSTALLED RINSE SYSTEMS

Employed Activity

W66 MODIFIED OR INSTALLED RINSE SYSTEMS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	92565	94,000	87,129	95,000	90,000	1997 110,428	1998 / 1997 = 1.04	Yes
							1998 87,384		

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Intended Activity

W68 IMPROVED RINSE EQUIPMENT OPERATION

Employed Activity

W68 IMPROVED RINSE EQUIPMENT OPERATION

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity

W68 IMPROVED RINSE EQUIPMENT OPERATION  
W53 USE OF A DIFFERENT PROCESS CATALYST

Employed Activity

W68 IMPROVED RINSE EQUIPMENT OPERATION  
W53 USE OF A DIFFERENT PROCESS CATALYST

**Process Code** P10 ELECTROPLATING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W74 IMPROVED APPLICATION TECHNIQUES

**Hennepin County, City of MINNETONKA -- OSMONICS, INC. -- ERCID -- 271400006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,4-dioxane</i>	1993	32300					1997 50,138	1998 / 1997 = 0.61	Yes
							1998 25,484		

**Process Code** P36 MEMBRANE MANUFACTURING  
Intended Activity  
W19 CONSOLIDATION OF MEMBRANE MANUFACTURING PROCESSES RESULTING IN A MORE FOCUSED EFFORT AND GREATER EFFICIENCY.  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N,n-dimethylformamide</i>	1993	36522					1997 33,110	1998 / 1997 = 1.63	Yes
							1998 48,090		

**Process Code** P36 MEMBRANE MANUFACTURING  
Intended Activity  
W19 CONSOLIDATION OF MEMBRANE MANUFACTURING PROCESSES RESULTING IN A MORE FOCUSED EFFORT AND GREATER EFFICIENCY.  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Hennepin County, City of MINNETONKA -- SIERRA CORP. -- ERCID -- 271400007**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1995	1440	2,799	2,911	2,911	2,911	1997 2,799 1998 2,911	1998 / 1997 = 1.07	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

- W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER BASED.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 SOURCE USAGE IS DICTATED BY SPECIFIC CLIENT REQUEST. QUALITY ALTERNATIVES ARE NOT YET AVAILABLE FOR MANY PRODUCT APPLICATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1993	23202	1,400	1,384	1,384	1,384	1997 1,400 1998 1,384	1998 / 1997 = 1.07	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W82 MODIFIED DESIGN OR COMPOSITION
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER-BASED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1993	545	6,839	8,542	8,542	8,542	1997 6,839 1998 8,542	1998 / 1997 = 1.07	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W82 MODIFIED DESIGN OR COMPOSITION

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER BASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 SOURCE USAGE IS DICTATED BY SPECIFIC CLIENT REQUEST. QUALITY ALTERNATIVES ARE NOT YET AVAILABLE FOR MANY PRODUCT APPLICATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Methyl Ethyl Ketone</i>	1993	5599	3,927	4,148	4,148	4,148	1997	3,927	1998 / 1997 = 1.07	No
							1998	4,148		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W82 MODIFIED DESIGN OR COMPOSITION  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER-BASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 SOURCE USAGE IS DICTATED BY SPECIFIC CLIENT REQUEST. QUALITY ALTERNATIVES ARE NOT YET AVAILABLE FOR MANY PRODUCT APPLICATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Styrene</i>	1993	746	9,690	12,367	12,367	12,367	1997	9,690	1998 / 1997 = 1.07	No
							1998	12,367		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER BASED.

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 SOURCE USAGE IS DICTATED BY SPECIFIC CLIENT REQUEST. QUALITY ALTERNATIVES ARE NOT YET AVAILABLE FOR MANY PRODUCT APPLICATIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1993	15224	34,562	95,250	95,250	95,250	1997 34,561	1998 95,250	1998 / 1997 = 1.07	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W82 MODIFIED DESIGN OR COMPOSITION
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER BASED.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1993	109514	23,394	26,065	26,065	26,065	1997 23,394	1998 26,065	1998 / 1997 = 1.07	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W82 MODIFIED DESIGN OR COMPOSITION
- W39 CONTINUE TO REVIEW AND TRAIN EMPLOYEES IN PROCESS PROCEDURES AND SAFE OPERATIONS.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W49 CONTINUED TO DEVELOP AND USE PRODUCTS THAT ARE LOW VOC OR WATER BASED.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1998	21881	26,354	21,811	21,000	20,000	1997 25,361 1998 21,820	1998 / 1997 = 2.37	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W58

**Hennepin County, City of NEW HOPE -- AVTEC FINISHING SYSTEMS, INC. -- ERICID -- 271650001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	38670	18,436	24,743	25,200	25,200	1997 18,436 1998 24,743	1998 / 1997 = 1.1	No

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19 IMPROVED ANALYTICAL CONTROLS.  
Employed Activity  
W19 IMPROVED ANALYTICAL CONTROLS.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W78 REDUCED CONCENTRATION OF PICKLING SOLUTION FROM 30 TO 20%.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W78 REDUCED CONCENTRATION OF PICKLING SOLUTION FROM 30 TO 20%.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W19 IMPROVED QA/QC OF PROCESS RESULTING IN LESS NEED FOR STRIPPING.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19 IMPROVED QA/QC OF PROCESS RESULTING IN LESS NEED FOR STRIPPING.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 INCREASES IN NITRIC ACID RELEASES ARE PARTIALLY DUE TO TIMING OF SHIPMENTS OF WASTE MADE DURING EARLY AND LATE 1998.

**Hennepin County, City of NEW HOPE -- CLARIANT -- ERCID -- 271650011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony Compounds</i>	1997	340					1997 340	1998 / 1997 = 1.07	Yes
							1998 89		

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** IF NOT USED AS A FIRE RETARDENT, THE QUANTITY OF OTHER CHEMICALS NEEDED WOULD INCREASE. WILL BE REDUCING THE NEED FOR ANTIMONY AS A RESULT OF THE LOSS OF A PRODUCT THAT HAS REQUIRED A SIGNIFICANT AMOUNT. REPLACED ONE OF OUR STANDARD USAGE PIGMENTS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1991	932					1998 276	1998 / 1997 = 1.25	Yes

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity

W58

SWITCHED LEAD CONTAINING ORDERS FROM BRANBURY MIXERS TO TWIN SCREW EXTRUDERS TO REDUCE THE AMOUNT OF LEAD DUST ENTERING THE DUST COLLECTION SYSTEM.

**Non Numeric Objective:** CUSTOMERS ARE AGGRESSIVELY URGED TO CONSIDER HEAVY METAL-FREE PIGMENTS. WE HAVE ELIMINATED ALL USE OF HEAVY METAL PIGMENTS WHERE FEASIBLE ALTERNATIVES EXIST AND FURTHER REDUCTION IS NOT LIKELY WITHOUT SIGNIFICANT ADVANCES IN SCRAP REDUCTION.

**Non Numeric Progress:** CUSTOMERS ARE AGGRESSIVELY URGED TO CONSIDER HEAVY METAL-FREE PIGMENTS. WE HAVE ELIMINATED ALL USE OF HEAVY METAL PIGMENTS WHERE FEASIBLE ALTERNATIVES EXIST AND FURTHER REDUCTION IS NOT LIKELY WITHOUT SIGNIFICANT ADVANCES IN SCRAP REDUCTION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Di(2-ethylhexyl) Phthalate</i>	1994	1100					1998 5,430	1998 / 1997 = 1.4	No

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity

W58

MINIMIZE SCRAP TO MINIMIZE RELEASE OF DEHP. AUTOMATION AND NEW EXTRUDERS INSTALLED IN 3/99.

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** IT IMPARTS CERTAIN DESIRABLE CHARACTERISTICS TO THE FINISHED PRODUCT THAT ALTERNATIVE COMPOUNDS ARE NOT ABLE TO DUPLICATE. THEREFORE, IT IS UNLIKELY THAT OUR USE WILL DECLINE. ONLY CONCEIVABLE ROUTE TO REDUCING EMISSIONS IS THROUGH WASTE MINIMIZATION

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F10 THE AMOUNT IN THE WASTE STREAMS IS NOT UNDER OUR CONTROL SINCE IT IS IN THE RESIN WE PURCHASE. THE NUMBER AND SIZE OF ORDERS CONTROLS USE - MANY SMALL ORDERS CAUSES MORE WASTE THAN A FEW LARGE ORDERS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1991	3890					1997 1,700 1998 700	1998 / 1997 = 1.42	Yes

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity  
W58

SWITCHED LEAD CONTAINING ORDERS FROM BRANBURY MIXERS TO TWIN SCREW EXTRUDERS TO REDUCE THE AMOUNT OF LEAD DUST ENTERING THE DUST COLLECTION SYSTEM.

**Non Numeric Objective:** CUSTOMERS ARE AGGRESSIVELY URGED TO CONSIDER HEAVY METAL-FREE PIGMENTS. WE HAVE ELIMINATED ALL USE OF HEAVY METAL PIGMENTS WHERE FEASIBLE ALTERNATIVES EXIST AND FURTHER REDUCTION IS NOT LIKELY WITHOUT SIGNIFICANT ADVANCES IN SCRAP REDUCTION.

**Non Numeric Progress:** CUSTOMERS ARE AGGRESSIVELY URGED TO CONSIDER HEAVY METAL-FREE PIGMENTS. WE HAVE ELIMINATED ALL USE OF HEAVY METAL PIGMENTS WHERE FEASIBLE ALTERNATIVES EXIST AND FURTHER REDUCTION IS NOT LIKELY WITHOUT SIGNIFICANT ADVANCES IN SCRAP REDUCTION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1991	5427					1997 2,000 1998 785	1998 / 1997 = 1.74	Yes

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity  
W58  
W42

REDUCED USAGE OF ZINC STEARATE AS A PROCESSING AID BY DE-COMMISSIONING A PIECE OF PRODUCTION EQUIPMENT THAT REQUIRED IT.  
SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** BASED ON PROJECTED INCREASES IN USAGE AND PRODUCTION RATES, AND CONSIDERING THE LACK OF SUITABLE REPLACEMENT COMPOUNDS, RELEASES OF ZINC COMPOUNDS ARE ANTICIPATED TO CONTINUE TO INCREASE UNLESS A SIGNIFICANT REDUCTION IN SCRAP GENERATION IS REALIZED.

**Non Numeric Progress:** BASED ON PROJECTED INCREASES IN USAGE AND PRODUCTION RATES, AND CONSIDERING THE LACK OF SUITABLE REPLACEMENT COMPOUNDS, RELEASES OF ZINC COMPOUNDS ARE ANTICIPATED TO CONTINUE TO INCREASE UNLESS A SIGNIFICANT REDUCTION IN SCRAP GENERATION IS REALIZED.

**Hennepin County, City of NEW HOPE -- DAKOTA GROWERS PASTA COMPANY -- ERCID -- 271650038**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Bromomethane</i>	1992	10303	14,324	9,224	15,545	15,545	1998 9,224	1998 / 1997 =	Yes

**Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

W19 IN ORDER TO ACHIEVE AN EFFECTIVE FUMIGATION, IT IS NECESSARY TO MAINTAIN MINIMUM CONCENTRATIONS OVER A 24 HOUR PERIOD. WEATHER CONDITIONS AFFECT THE AMOUNT NEEDED.

Employed Activity

W19 IT HAS BEEN OUR PRACTICE TO FUMIGATE TWICE A YEAR RATHER THAN THREE TIMES A YEAR.

**Hennepin County, City of NEW HOPE -- INNO-FLEX CORPORATION -- ERCID -- 271650048**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	19223	19,223	12,687	12,687	12,687	1997 19,223 1998 12,687	1998 / 1997 = 1.1	Yes

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

W71 INTENDED TO CHANGE FROM 100% TOLUENE TO M438 SCREEN WASH (56%).

Employed Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

W71 INTENDED TO CHANGE FROM 100% TOLUENE TO M438 SCREEN WASH (56%)

**Hennepin County, City of NEW HOPE -- TOOL PRODUCTS -- ERCID -- 271650013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1993	21085	83,485	200,055	200,055	200,055	1997 83,485 1998 200,055	1998 / 1997 = 1.07	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W19 CONTINUE BETTER JOB MANAGEMENT AND MATERIAL HANDLING.

W58 CONTINUE TO REDUCE SCRAP METAL PRODUCED BY REDUCING RAW MATERIAL EXPENSES, WASTE TRANSPORT AND RECYCLING.

Employed Activity

W58 CONTINUED TO REDUCE SCRAP METAL PRODUCED BY REDUCING RAW MATERIAL EXPENSES, WASTE TRANSPORT, AND RECYCLING.

W19 CONTINUED BETTER JOB MANAGEMENT, MATERIAL HANDLING, AND SCRAP METAL REDUCTION.

**Barriers to P2:**

- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
- F10 AS PRODUCTION INCREASES, SO DOES OUR RELEASE OF COPPER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1993	2825	20,838	131,200	131,200	131,200	1997 20,838 1998 131,200	1998 / 1997 = 1.07	No

**Process Code** P01

CASTING ANY MATERIAL

Intended Activity

W19

CONTINUE BETTER JOB MANAGEMENT AND MATERIAL HANDLING.

W58

CONTINUE TO REDUCE SCRAP METAL PRODUCED BY REDUCING RAW MATERIAL EXPENSES, WASTE TRANSPORT, AND RECYCLING.

Employed Activity

W19

CONTINUED BETTER JOB MANAGEMENT AND MATERIAL HANDLING.

W58

CONTINUED TO REDUCE SCRAP METAL PRODUCED BY REDUCING RAW MATERIAL EXPENSES, WASTE TRANSPORT, AND RECYCLING.

**Barriers to P2:**

- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
- F10 AS PRODUCTION INCREASES, SO DOES OUR RELEASE OF NICKEL.

**Hennepin County, City of OSSEO -- CERAM-TRAZ CORP. -- ERCID -- 271750002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1993	1300	1,300	11,320	12,450	13,500	1997 1,300 1998 11,320	1998 / 1997 = 1.1	No

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, 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

**Barriers to P2:**

- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
- F10 USAGE CONTINUES TO GROW BECAUSE IT IS A COMPONENT OF WATER REDUCIBLE PAINTS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1993	9200	3,200	9,700	9,700	9,200	1997 3,240 1998 9,730	1998 / 1997 = 1.1	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1993	9200	8,400	5,200	5,200	4,800	1997 8,400 1998 5,200	1998 / 1997 = 1.1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W42 SUBSTITUTED RAW MATERIALS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W82 MODIFIED DESIGN OR COMPOSITION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1993	31300	30,400	12,200	11,800	10,900	1997 30,410 1998 12,200	1998 / 1997 = 1.1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W42 SUBSTITUTED RAW MATERIALS  
W82 MODIFIED DESIGN OR COMPOSITION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1993	60700	59,900	34,700	34,700	28,400	59,900	34,700	1998 / 1997 = 1.1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W82 MODIFIED DESIGN OR COMPOSITION  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W82 MODIFIED DESIGN OR COMPOSITION  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Hennepin County, City of PLYMOUTH -- AACRON, INC. -- ERCID -- 271800011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitric Acid</i>	1996	920					5,848	3,441	1998 / 1997 = 0.79	Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W19  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1996	82396					1997 67,806 1998 62,401	1998 / 1997 = 0.79	Yes

- Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, 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  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Hennepin County, City of PLYMOUTH -- BOSTON SCIENTIFIC SCIMED, INC. -- ERCID -- 271800053**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>2-chloro-1,1,1,2-tetrafluoroethane</i>	1998	69250					1997 153,890 1998 144,595	1998 / 1997 = 1.02	Yes

- Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)
- Intended Activity  
W53 USE OF A DIFFERENT PROCESS CATALYST  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** IMPROVE THE OPERATING TIME OF RECOVERY SYSTEM AND IMPROVE OUR HCFC 124 RECOVERY TO 50 PERCENT. EVALUATE CONVERSION TO A 100 PERCENT ETHYLENE OXIDE SYSTEM.

**Non Numeric Progress:** HCFC RECLAIMING EFFICIENCIES INCREASED TO MID 80'S BY ELECTRICAL AND MECHANICAL UPGRADES TO THE DRYING SYSTEMS. EVALUATED 100% ETHYLENE OXIDE STERILIZATION BUT NOT ECONOMICALLY FEASIBLE DUE TO CONSTRUCTION COSTS TO COMPLY WITH BUILDING CODES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Oxide</i>	1996	60					1997 14,645 1998 13,741	1998 / 1997 = 1.02	Yes

- Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)
- Intended Activity  
W53 USE OF A DIFFERENT PROCESS CATALYST
- Employed Activity  
W53 USE OF A DIFFERENT PROCESS CATALYST

**Non Numeric Objective:** CONTINUE TO OPERATE OUR SCRUBBER SYSTEM AT 99% EFFICIENCY.

**Non Numeric Progress:** DRY BED SCRUBBER ADDED IN CONJUNCTION WITH WET SCRUBBER WHICH INCREASED EFFICIENCY TO 99.99% OR UNDETECTABLE FOR ETHYLENE OXIDE EMISSIONS.

**Hennepin County, City of PLYMOUTH -- CIRCUIT SCIENCE, INC. -- ERCID -- 271800013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	1054					1997 52,835 1998 55,476	1998 / 1997 = 1.6	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W75

CHANGED FROM SPRAY TO OTHER SYSTEM

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W74

IMPROVED APPLICATION TECHNIQUES

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

Employed Activity

W42

SUBSTITUTED RAW MATERIALS

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W78

**Non Numeric Objective:** ATTEMPTING TO REDUCE THE SCRAP RATE BY INITIATING IMPROVED QUALITY CONTROL PROCEDURES.

**Non Numeric Progress:** TRYING TO REDUCE THE AMOUNT OF COPPER USED, CONTINUALLY TRYING TO REDUCE OUR SCRAP RATE AND ARE USING BETTER FEED CONTROLS AND FLOW REGULATORS.

**Hennepin County, City of PLYMOUTH -- PRECISION DIVERSIFIED INDUSTRIES, INC. -- ERCID -- 271800029**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1993	21259	17,185	20,265	20,265	20,265	1997 17,185 1998 20,265	1998 / 1997 = 1.04	No

**Process Code** P10 ELECTROPLATING

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

W58

CONTINUE TO INVESTIGATE ALTERNATIVES TO COPPER OXIDE PROCESS TO PROMOTE INNER LAYER ADHESION.

W19

CONTINUE TO REVIEW PROCEDURES TO REDUCE WASTE.

Employed Activity

W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W39 ADDED A RECYCLING COOLING WATER SYSTEM.  
**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Hennepin County, City of PLYMOUTH -- PROGRESS CASTING GROUP -- ERCID -- 271800038**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	8000	13,000	24,000	26,000	28,000	1997 12,427 1998 23,831	1998 / 1997 = 1.56	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Hennepin County, City of PLYMOUTH -- SPICER OFF-HIGHWAY PRODUCTS DIVISION -- ERCID -- 271800012**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1992	16500					1997 34,020 1998 347	1998 / 1997 = 1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W41 INCREASED PURITY OF RAW MATERIALS  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity  
 W41 INCREASED PURITY OF RAW MATERIALS  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 Employed Activity  
 W41 INCREASED PURITY OF RAW MATERIALS  
 W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** NEW AXLES HAVE BEEN DEVELOPED THAT MAY RESULT IN LESS SCRAP PER AXLE BUT SINCE ALL SCRAP IS RECYCLED ANYWAY, ENVIRONMENTAL EMISSIONS ARE NOT SIGNIFICANTLY AFFECTED AND TARGETED REDUCTION QUANTITIES ARE NOT MEANINGFULLY CALCULATED.

**Non Numeric Progress:** CONTINUED TO TIGHTEN SPECIFICATIONS FOR METALS AND CHECK ON VENDOR IMPURITIES - SO LITTLE METAL WASTE REMAINS MAKING TRACKING DIFFICULT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1992	27000					1997 74,225 1998 750	1998 / 1997 = 1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 W41 INCREASED PURITY OF RAW MATERIALS  
 Employed Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 W41 INCREASED PURITY OF RAW MATERIALS  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 W41 INCREASED PURITY OF RAW MATERIALS  
 Employed Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** NEW AXLES HAVE BEEN DEVELOPED THAT MAY RESULT IN LESS SCRAP PER AXLE BUT SINCE ALL SCRAP IS RECYCLED ANYWAY, ENVIRONMENTAL EMISSIONS ARE NOT SIGNIFICANTLY AFFECTED AND TARGETED REDUCTION QUANTITIES ARE NOT MEANINGFULLY CALCULATED.

**Non Numeric Progress:** CONTINUED TO TIGHTEN SPECIFICATIONS FOR METALS AND CHECK ON VENDOR IMPURITIES - SO LITTLE METAL WASTE REMAINS MAKING TRACKING DIFFICULT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1992	16500					1997 46,390 1998 472	1998 / 1997 = 1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W41 INCREASED PURITY OF RAW MATERIALS  
 W81 CHANGED PRODUCT SPECIFICATIONS

Employed Activity  
W41 INCREASED PURITY OF RAW MATERIALS  
W81 CHANGED PRODUCT SPECIFICATIONS  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** NEW AXLES HAVE BEEN DEVELOPED THAT MAY RESULT IN LESS SCRAP PER AXLE BUT SINCE ALL SCRAP IS RECYCLED ANYWAY, ENVIRONMENTAL EMISSIONS ARE NOT SIGNIFICANTLY AFFECTED AND TARGETED REDUCTION QUANTITIES ARE NOT MEANINGFULLY CALCULATED.

**Non Numeric Progress:** CONTINUED TO TIGHTEN SPECIFICATIONS FOR METALS AND CHECK ON VENDOR IMPURITIES - SO LITTLE METAL WASTE REMAINS MAKING TRACKING DIFFICULT.

**Hennepin County, City of ROCKFORD -- DIVERSIFOAM PRODUCTS -- ERCID -- 271950007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorodifluoromethane</i>	1995	56246							Yes

**Process Code** P13 FOAM BLOWING  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** REDUCE UNNECESSARY RELEASES BY ENSURING THAT THE PROCESS IS OPERATING AS EFFICIENTLY AS POSSIBLE. CONTINUING TO MONITOR THE AVAILABILITY OF NEW NON-TOXIC REPLACEMENTS.

**Non Numeric Progress:** CONSULT WITH RAW MATERIAL SUPPLIERS TO DEVELOP A REPLACEMENT CHEMICAL THAT IS NON-POLLUTING. NO CHEMICALS CURRENTLY ARE ACCEPTABLE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Chloromethane</i>	1995	89686					1997 87,030 1998 90,616	1998 / 1997 = 0.93		Yes

**Process Code** P13 FOAM BLOWING  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** REDUCE UNNECESSARY RELEASES BY ENSURING THAT THE PROCESS IS OPERATING AS EFFICIENTLY AS POSSIBLE. CONTINUING TO MONITOR THE AVAILABILITY OF NEW NON-TOXIC REPLACEMENTS.

**Non Numeric Progress:** CONSULT WITH RAW MATERIAL SUPPLIERS TO DEVELOP A REPLACEMENT CHEMICAL THAT IS NON-POLLUTING. NO CHEMICALS CURRENTLY ARE ACCEPTABLE.

**Hennepin County, City of ROGERS -- GRACO-KOCH CENTER -- ERCID -- 27200014**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	7300	7,300	10,000	10,000	10,000	1998 10,200	1998 / 1997 = 1.09	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 CHANGES TO LOW VOC COATINGS AND BETTER CAPTURE OF FLUSH SOLVENT HAS RESULTED IN REDUCED USE, RELEASES, AND TRANSFERS. EFFORTS TO FIND A LESS HAZARDOUS SUBSTITUTE CONTINUE.

**Hennepin County, City of ST. LOUIS PARK -- ALLIEDSIGNAL, INC. -- ERCID -- 27215003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1998						1997 99,637 1998 160,311	1998 / 1997 = 1.72	No

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** OUR CURRENT WASTEWATER TREATMENT SYSTEM REMOVES 99.058% COPPER FROM THE WASTEWATER STREAM. WE STARTED TO SWITCH TO A NEW RACK DESIGN WHICH HAS REDUCED OUR GENERATION OF COPPER ETCH. PLAN TO HAVE THE REST OF OUR PLATING SWITCHED OVER BY YEAR END.

**Non Numeric Progress:** CUT OUR GENERATION OF COPPER ETCH BY IMPLEMENTING THE RACK CHANGE WHEN PLATING 50% OF OUR PRODUCT.

**Barriers to P2:** F06 SPECIFIC REGULATORY / PERMIT BURDENS

**Hennepin County, City of ST. LOUIS PARK -- DOUGLAS CORP. - PLATING DIVISION -- ERCID -- 272150034**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1995	30000	10,000	9,500	9,000	8,000			Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W58 OFF-SITE RECYCLING.  
Employed Activity  
W58 OFF-SITE RECYCLING.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Copper</i>	1995	1100	1,000	900	800	500	6,459	6,320	1998 / 1997 = 1.13	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W58 OFF-SITE RECYCLING.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
Employed Activity  
W58 OFF-SITE RECYCLING.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nickel</i>	1995	18000	5,000	4,500	4,000	3,500	14,408	12,694	1998 / 1997 = 1.13	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 OFF-SITE RECYCLING.  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 OFF-SITE RECYCLING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitric Acid</i>	1995	10522	10,000	9,000	8,000	8,000	9,113	8,634	1998 / 1997 = 1.13	Yes

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Hennepin County, City of ST. LOUIS PARK -- FLAME METALS PROCESSING CORP. -- ERCID -- 272150019**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tetrachloroethylene</i>	1995	36572	43,979	20,400	5,000	0	1997 43,980 1998 20,400	1998 / 1997 = 1.1	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 Employed Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

**Hennepin County, City of ST. LOUIS PARK -- NORTHLAND ALUMINUM PRODUCTS, INC. -- ERCID -- 272150009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1997	11354		11,694	10,934	10,622	1997 11,354 1998 11,509	1998 / 1997 = 1.08	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1996	1756	1,433	1,418	1,600	1,600	1997 1,531 1998 1,412	1998 / 1997 = 0.92	No

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)  
 Intended Activity  
 W49

Employed Activity  
W49

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 REDUCING STYRENE CONTENT FURTHER IN RAW MATERIAL WILL CAUSE PRODUCTION PROBLEMS AND JEOPARDIZE QUALITY. PREVIOUSLY REDUCED THE CONTENT AND ACHIEVED A GREAT REDUCTION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1997	15129	13,033	15,734	15,233	14,928	1997 15,343	1998 15,855	1998 / 1997 = 1.06	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 MADE GREAT REDUCTIONS IN THE PAST AND ACHIEVED A REDUCTION THIS YEAR, BUT FELL SHORT OF OUR GOAL (WITHIN 100 POUNDS).

**Hennepin County, City of ST. LOUIS PARK -- NOVARTIS NUTRITION CORPORATION -- ERCID -- 272150008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitrate Compounds (water dissociable)</i>	1998	44000					1997 28,909			No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W71 CONTINUE TO SEARCH FOR OTHER CHEMICALS TO USE FOR FDA MANDATED CLEANING.  
 Employed Activity  
 W71 UNSUCCESSFUL IN LOCATING NON LISTED CHEMICALS.

**Non Numeric Objective:** MINIMIZE OR ELIMINATE THE USE OF NITRIC ACID.

**Non Numeric Progress:** MINIMIZE OR ELIMINATE THE USE OF NITRIC ACID.

**Barriers to P2:**  
 F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F06 SPECIFIC REGULATORY / PERMIT BURDENS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Nitric Acid</i>	1994	200					1997 21,446	1998 32,714	1998 / 1997 = 1.07	No

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Non Numeric Objective:** IMPROVE THE PH NEUTRALIZATION SYSTEM TO ASSURE 100% EFFECTIVENESS.

**Non Numeric Progress:** IMPROVED MONITORING SYSTEMS.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F06 SPECIFIC REGULATORY / PERMIT BURDENS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1998	45					1998 12,835	1998 / 1997 = 1.07	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Non Numeric Objective:** IMPROVE THE PH NEUTRALIZATION SYSTEM TO ASSURE 100% EFFECTIVENESS.

**Non Numeric Progress:** IMPROVED MONITORING SYSTEMS.

**Barriers to P2:** F10 CHEMICAL WAS NOT REQUIRED TO BE REPORTED PRIOR TO 1998.

**Hennepin County, City of ST. LOUIS PARK -- SUPER RADIATOR COILS -- ERCID -- 272150033**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1997	738	738	3,572	0	0	1997 738 1998 3,572	1998 / 1997 = 0.98	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W19 CONTINUE RESEARCH WITH OUR EMPLOYEES TO REDUCE METAL SCRAP.  
Employed Activity  
W19 CONTINUED RESEARCH WITH OUR EMPLOYEES TO REDUCE METAL SCRAP.  
W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W31 IMPROVED STORAGE OR STACKING PROCEDURES

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Copper</i>	1993	27129	22,029	50,432	0	0	1997 22,029	1998 50,432	1998 / 1997 = 0.98	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

- W19 CONTINUE RESEARCH WITH OUR EMPLOYEES TO REDUCE COPPER SCRAP.
- W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

- W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W19 CONTINUED RESEARCH WITH OUR EMPLOYEES TO REDUCE COPPER SCRAP.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1998		
<i>Nickel</i>	1998	2580		2,580	0	0	1998 2,580		1998 / 1997 = 0.98	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.
- W19 CONTINUE TO RESEARCH WITH OUR EMPLOYEES TO REDUCE METAL SCRAP.

Employed Activity

- W19 CONTINUE TO RESEARCH WITH OUR EMPLOYEES TO REDUCE METAL SCRAP.
- W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.
- W31 IMPROVED STORAGE OR STACKING PROCEDURES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tetrachloroethylene</i>	1993	145166	58,315	33,820	0	0	1997 58,315 1998 33,820	1998 / 1997 = 0.98	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W58 CONTINUE TO EVALUATE OUR PROCESSES, AND BASED ON EVALUATIONS MAKE ANY NEEDED PROCEDURE CHANGES TO THE PROCESS.  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W58 CHANGED THE ENTIRE PROCESS FOR HANDLING TETRACHLOROETHYLENE TO A MORE EFFICIENT AND CLOSED SYSTEM.

**Hennepin County, City of ST. PAUL -- NORTHWEST AIRLINES, INC. -- ERCID -- 279990003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1993	29000	25,000	20,000	15,000	10,000	1997 17,700 1998 12,610	1998 / 1997 = 0.94	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 Employed Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1993	32000	20,000	5,000	5,000	5,000	1997 31,079 1998 58,310	1998 / 1997 = 0.94	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
Employed Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Houston County, City of SPRING GROVE -- NORTHERN AUTOMOTIVE SYSTEMS -- ERCID -- 280840003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	11000	11,000	17,000	15,000	15,000	1997 15,050 1998 21,350	1998 / 1997 = 1.5	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W71 CLEANING SOLVENTS SUBSTITUTED TO REDUCE OR ELIMINATE TOLUENE CONTENT.  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W71 CLEANING SOLVENTS SUBSTITUTED TO REDUCE OR ELIMINATE TOLUENE CONTENT.  
W74 IMPROVED APPLICATION TECHNIQUES  
**Process Code** P24 PRINTING  
Intended Activity  
W71 CLEANING SOLVENTS SUBSTITUTED TO REDUCE OR ELIMINATE TOLUENE CONTENT.  
Employed Activity  
W71 CLEANING SOLVENTS SUBSTITUTED TO REDUCE OR ELIMINATE TOLUENE CONTENT.

**Hubbard County, City of BEMIDJI -- POTLATCH CORP. - OSB -- ERCID -- 290210001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1991	140728					1997 56,432 1998 44,935	1998 / 1997 = 1.01	No

**Process Code** P08 DRYING  
Intended Activity  
W89

W49 CONTINUED TO REQUEST THAT ALL ADHESIVES CONTAIN LESS THAN THE DEMINIMUS CONCENTRATION OF FORMALDEHYDE IN THE UN-REACTED OR FREE STATE.  
**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W89  
 W49 ACTIVELY PARTICIPATE IN ADVANCES IN RESIN TECHNOLOGY.  
**Non Numeric Objective:** PARTICIPATE IN ADVANCES IN RESIN TECHNOLOGY, IMPROVE UTILIZATION OF RESIN THROUGH HOUSEKEEPING, MAINTENANCE, MODIFICATIONS AND PROCEDURES. REVIEW LITERATURE, TEST, EVALUATE AND IMPLEMENT METHODS TO REDUCE RESIN USE PER MSF. SEE P2PR FOR MORE INFO.  
**Non Numeric Progress:** PARTICIPATE IN ADVANCES IN RESIN TECHNOLOGY, IMPROVE UTILIZATION OF RESIN THROUGH HOUSEKEEPING, MAINTENANCE, MODIFICATIONS AND PROCEDURES. REVIEW LITERATURE, TEST, EVALUATE AND IMPLEMENT METHODS TO REDUCE RESIN USE PER MSF. SEE P2PR FOR MORE INFO.  
**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F10 PROCESS UTILIZES A RAW MATERIAL (WOOD) THAT HAS A FIXED COMPONENT OF FORMALDEHYDE. NO SATISFACTORY ALTERNATIVES AT THIS TIME.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1996	206525					1997 157,031 1998 101,471	1998 / 1997 = 1.01	No

**Process Code** P08 DRYING  
 Intended Activity  
 W89 SEE NARRATIVE ATTACHED TO PROGRESS REPORT  
 W49 SEE NARRATIVE ATTACHED TO PROGRESS REPORT  
**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
 Intended Activity  
 W49 SEE NARRATIVE ATTACHED TO PROGRESS REPORT.  
 W89 SEE NARRATIVE ATTACHED TO PROGRESS REPORT  
**Non Numeric Objective:** SEE NARRATIVE ATTACHED TO P2PR.  
**Non Numeric Progress:** SEE NARRATIVE ATTACHED TO P2PR.  
**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 PROCESS UTILIZES A RAW MATERIAL (WOOD) THAT HAS A FIXED COMPONENT OF METHANOL. NO SATISFACTORY ALTERNATIVES AT THIS TIME.

**Itasca County, City of GRAND RAPIDS -- POTLATCH CORP. -- ERCID -- 311100003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1991	64472					1997 37,192 1998 39,253	1998 / 1997 = 1.14	No

**Process Code** P08 DRYING  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W58 REVIEW LITERATURE, TEST, EVALUATE, AND IMPLEMENT, AS APPROPRIATE.  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** SEE NARRATIVE ATTACHED TO PROGRESS REPORT.

**Non Numeric Progress:** SEE NARRATIVE ATTACHED TO PROGRESS REPORT.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1995	175173					1997 153,249 1998 161,754	1998 / 1997 = 1.14	No

**Process Code** P08 DRYING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19 REVIEW LITERATURE, TEST, EVALUATE AND IMPLEMENT AS APPROPRIATE.  
W58 REVIEW LITERATURE, TEST, EVALUATE, AND IMPLEMENT AS APPROPRIATE.  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W81 CHANGED PRODUCT SPECIFICATIONS  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** SEE NARRATIVE ATTACHED TO PROGRESS REPORT.

**Non Numeric Progress:** SEE NARRATIVE ATTACHED TO PROGRESS REPORT.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Jackson County, City of JACKSON -- AG-CHEM EQUIPMENT CO., INC. -- ERCID -- 320600007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1993	3357	76,400	90,500	90,500	90,500	1997 81,500 1998 97,000	1998 / 1997 = 1.03	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1993	5889	13,000	11,200	7,000	1,000	1997 26,000 1998 13,200	1998 / 1997 = 1.03	No	

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Kanabec County, City of MORA -- AMERICAN MARINE, LTD -- ERCID -- 330650005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Styrene</i>	1995	13276					1997 10,058 1998 19,352	1998 / 1997 = 0.94	No	

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W74 IMPROVED APPLICATION TECHNIQUES  
W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W33 INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 PRODUCED MORE PRODUCT SO WE USED MORE MATERIAL. CHANGES IN EMISSION FACTORS.

**Kanabec County, City of MORA -- ENGINEERED POLYMERS CORP. -- ERCID -- 330650001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1991	89803	35,923	27,943			1997 97,903 1998 48,843	1998 / 1997 = 0.99	No

**Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 INCREASE IN PRODUCTION ACTIVITY REQUIRING THIS ITEM.

**Kandiyohi County, City of WILLMAR -- JENNIE-O FOODS, INC. -- ERCID -- 341750008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1993	18249	4,322	8,252	8,000	8,000	1998 19,532	1998 / 1997 = 1.12	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
Employed Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
**Process Code** P26 REFRIGERATING/FREEZING

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
Employed Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Koochiching County, City of BIG FALLS -- PAGE & HILL FOREST PRODUCTS, INC. -- ERCID -- 360050001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	17500					1997 17,743 1998 21,669	1998 / 1997 = 1.2	Yes

**Process Code** P34 WEATHERIZING (WOOD TREATING, CORROSION INHIBITING, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** MAINTAIN ALL PUMPS, VALVES, DOOR SEALS, HOSES, ETC. IN ACZA PLANT. LEAVE TREATED WOOD IN CYLINDER LONGER TO ALLOW MORE AMMONIA TO BE RECAPTURED INTO SYSTEM. KEEP AMMONIA RELEASES TO A MINIMUM AS LONG AS ACZA PLANT IS IN OPERATION.

**Non Numeric Progress:** BEGAN USING A SECOND TREATING CYLINDER IN OUR ACZA PLANT. ALLOWED US TO LEAVE WOOD IN THE CYLINDER WITHOUT SLOWING PRODUCTION. THIS SEEMS TO REDUCE RELEASES OF AMMONIA.

**Koochiching County, City of INTL FALLS -- BOISE CASCADE CORP. -- ERCID -- 360100001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Acetaldehyde</i>	1996	64000	66,000	56,000	57,000	57,000	1997 66,000	1998 / 1997 = 0.99	Yes
							1998 56,000		

**Process Code** P22 PAPER MANUFACTURING  
 Intended Activity  
 W39 NCG SYSTEM UPTIME. UNCONTROLLED NONCONDENSABLE GAS SYSTEM VENTS WERE REDUCED OR HELD AT VERY LOW LEVELS.  
 Employed Activity  
 W58 OPERATING THE STEAM STRIPPER REMOVES CHEMICALS LIKE ACETALDEHYDE FROM THE WASTEWATER SYSTEM AND INCINERATES THEM.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1988	48100	709,000	82,000	83,000	84,000	1997 709,000	1998 / 1997 = 0.98	No
							1998 82,000		

**Process Code** P22 PAPER MANUFACTURING  
 Employed Activity  
 W19 MONITORING HELPED ENSURE THAT RESIDUAL AMMONIA LEVELS WERE MAINTAINED AT A RECOMMENDED LOW LEVEL.  
 W58 STEAM STRIPPER WAS USED TO REMOVE CONTAMINANTS FROM THE PULP MILL CONDENSATES WHICH WERE THEN REUSED IN THE PROCESS.  
 W42 SUBSTITUTED RAW MATERIALS. NUTRIENT AMMONIA ADDITION TO THE WWTP WAS PERMANENTLY REPLACED WITH UREA.  
 W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING. LIQUOR LOSSES WERE KEPT AT VERY LOW LEVELS.  
 W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING. SPILLS OF COATING WERE KEPT AT MINIMUM LEVELS.  
 W53 USE OF A DIFFERENT PROCESS CATALYST

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Catechol</i>	1989	10200	2,200	2,100	2,200	2,200	1997 2,200 1998 2,100	1998 / 1997 = 0.99	Yes

**Process Code** P22 PAPER MANUFACTURING

Employed Activity

- W39 LIQUOR LOSSES IN THE MILL WERE HELD AT VERY LOW LEVELS.
- W58 PART OF THE FILTRATE FROM THE PREWASHER IN THE BLEACH PLANT IS USED IN THE PULP MILL SCREEN ROOM.
- W58 17% OF SLUDGE FROM WWTP WAS BURNED IN THE NO. 2 POWER BOILER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1988	450070	27,000	27,000	28,000	28,000	1997 27,390 1998 27,390	1998 / 1997 = 0.99	No

**Process Code** P22 PAPER MANUFACTURING

Employed Activity

- W39 INCORPORATION OF PROCESS SAFETY MANAGEMENT PROGRAM WITH IS A MECHANICAL INTEGRITY MAINTENANCE PROGRAM TO ENSURE THAT NO CATASTROPHIC RELEASES OCCUR.
- W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING.
- W42 SUBSTITUTED RAW MATERIALS
- W19 ONGOING OPTIMIZATION OF BLEACHING CONTROLS WHICH REDUCES EXCESS EMISSIONS IN VENT GASES.

**Barriers to P2:** F10 THE AIR GOAL FOR CHLORINE IS ZERO AND WILL NOT BE MET UNTIL THE MILL IMPLEMENTS 100% SUBSTITUTION OF CHLORINE WITH CHLORINE DIOXIDE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine Dioxide</i>	1991	463600	410,000	410,000	420,000	420,000	1997 413,200 1998 413,200	1998 / 1997 = 0.99	Yes

**Process Code** P22 PAPER MANUFACTURING

Employed Activity

- W39 INCORPORATION OF PROCESS SAFETY MANAGEMENT PROGRAM WHICH IS A MECHANICAL INTEGRITY MAINTENANCE PROGRAM TO ENSURE THAT NO CATASTROPHIC RELEASES OCCUR.
- W19 ONGOING OPTIMIZATION OF BLEACHING CONTROLS WHICH REDUCES EXCESS EMISSIONS IN VENT GASES.
- W39 GOODHOUSEKEEPING AND OPERATOR TRAINING.
- W42 SUBSTITUTED RAW MATERIALS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chloroform</i>	1988	282430	17,000	21,000	22,000	22,000	1997 17,000 1998 21,000	1998 / 1997 = 0.99	No

**Process Code** P22 PAPER MANUFACTURING  
Employed Activity  
W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING.  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F10 NONE OF THE GOALS FOR CHLOROFORM WERE MET AND WILL NOT BE MET UNTIL THE MILL IMPLEMENTS 100% SUBSTITUTION OF CHLORINE WITH CHLORINE DIOXIDE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1990	173930	3,540,000	7,280,000	7,290,000	7,290,000	1997 8,540,000 1998 7,280,000	1998 / 1997 = 0.99	Yes

**Process Code** P22 PAPER MANUFACTURING  
Employed Activity  
W39 IMPROVE UPTIME OF THE NONCONDENSABLE GAS SYSTEM.  
W58 17% OF THE SLUDGE FROM THE WWTP WAS BURNED IN THE NO. 2 POWER BOILER.BUR  
W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING.  
W58 STEAM STRIPPER WAS USED TO REMOVE CONTAMINANTS FROM THE PULP MILL CONDENSATES WHICH WERE THEN REUSED IN THE PROCESS.  
W58 PART OF THE FILTRATE FROM THE PREWASHER IN THE BLEACH PLANT IS USED IN THE PULP MILL SCREEN ROOM.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1993	7800	5,600	340,000	350,000	350,000	1997 5,630 1998 345,720	1998 / 1997 = 0.99	Yes

**Process Code** P22 PAPER MANUFACTURING  
Employed Activity  
W39 GOOD HOUSEKEEPING AND OPERATOR TRAINING.  
W58 COUNTER CURRENT WASHING.  
W58 BURN SLUDGE IN NO. 2 POWER BOILER AND BLACK LIQUOR IN RECOVERY FURNACE.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	259000					1997 200,140 1998 220,090	1998 / 1997 = 1.01	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** CONTINUE TO IMPLEMENT BEST MANUFACTURING PRACTICES TO ENSURE A MINIMAL LOSS OF SOLVENT IN OUR PROCESS.

**Non Numeric Progress:** ATTEMPTING TO MINIMIZE USE OF N-HEXANE THROUGH IMPROVING OPERATION AND MAINTENANCE OF PROCESSING EQUIPMENT.

**Lake of the Woods County, City of BAUDETTE -- SOLVAY PHARMACEUTICALS -- ERCID -- 390050001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichloromethane</i>	1990	110117	14,929	33,483	21,467	27,283	1997 15,608 1998 33,483	1998 / 1997 = 2.34	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F06 SPECIFIC REGULATORY / PERMIT BURDENS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1990	61626	8,378	16,255	9,288	11,997	1997 7,727 1998 16,255	1998 / 1997 = 1.95	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F06 SPECIFIC REGULATORY / PERMIT BURDENS

**Le Sueur County, City of LE SUEUR -- ADC TELECOMMUNICATIONS INC. -- ERCID -- 400700039**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	30603					1997 39,544 1998 36,942	1998 / 1997 = 0.93	No

**Process Code** P36 ELECTRONIC ASSEMBLY  
 Intended Activity  
 W58 ONGOING EFFORTS TO REDUCE WASTE AND MAXIMIZE OPERATIONS.  
 Employed Activity  
 W58 ONGOING EFFORTS TO REDUCE WASTE AND MAXIMIZE OPERATIONS.  
**Non Numeric Objective:** NO CURRENT ALTERNATIVE TO COPPER WIRE.  
**Non Numeric Progress:** ONGOING EFFORTS TO MINIMIZE WASTE. NO CURRENT ALTERNATIVE TO COPPER WIRE.  
**Barriers to P2:** F10 NO CURRENT ALTERNATIVE FOR COPPER WIRE IN THIS ELECTRONIC ASSEMBLY OPERATION.

**Le Sueur County, City of LE SUEUR -- LE SUEUR INCORPORATED -- ERCID -- 400700020**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1997	72330	72,330	98,035	98,035	98,035			No

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
 W42 SUBSTITUTED RAW MATERIALS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	77940	77,940	99,599	99,599	99,599	1997 77,940 1998 99,599	1998 / 1997 = 1.27	No

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Lyon County, City of COTTONWOOD -- NORCRAFT COMPANIES, LLC -- ERCID -- 420250006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Ethylbenzene</i>	1992	226	11,988	10,210	10,802	11,429	1997 1998	12,109 10,210	1998 / 1997 = 1.07	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W35 INSTALLED VAPOR RECOVERY SYSTEMS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Methanol</i>	1992	375	10,964	10,189	10,779	11,404	1997 1998	10,964 10,189	1998 / 1997 = 1.07	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
 Employed Activity  
 W35 INSTALLED VAPOR RECOVERY SYSTEMS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Toluene</i>	1992	92264	67,719	58,218	61,594	65,166	1997 1998	67,719 58,218	1998 / 1997 = 1.07	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W35 INSTALLED VAPOR RECOVERY SYSTEMS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1992	14788	55,026	46,797	49,510	52,381	1997 55,579 1998 46,797	1998 / 1997 = 1.07	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
Employed Activity  
W35 INSTALLED VAPOR RECOVERY SYSTEMS

**Lyon County, City of MARSHALL -- SCHWAN'S SALES ENTERPRISES, INC. -- ERCID -- 420950008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1992	16260					1998 9,350	1998 / 1997 = 1	No

**Process Code** P26 REFRIGERATING/FREEZING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** NORMAL OPERATION OF THE SYSTEM IS DESIGNED TO MINIMIZE RELEASES OF AMMONIA TO THE WASTEWATER SYSTEM THROUGH AIR PURGERS, DRIP LEGS OR OTHER DRAIN POINTS.

**Non Numeric Progress:** BASED ON TOTAL AMMONIA PURCHASED AND USING A 3-YEAR RUNNING AVERAGE, AMMONIA USAGE HAS DECLINED 32.8% FROM 19,900 LBS/ YR IN 1991-1993 TO 13,367 LBS/YR IN 1996-1998.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 MINOR SYSTEM LOSSES ARE INHERENT IN THE NORMAL OPERATION OF THE SYSTEM. THE SYSTEM IS DESIGNED AND OPERATED TO MINIMIZE THESE LOSSES.

**Marshall County, City of WARREN -- NORDIC FIBERGLASS, INC. -- ERCID -- 452750002**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1990	23549	3,061	3,532	4,003	4,474	1997 47,747 1998 103,196	1998 / 1997 = 0.89	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W49 FURTHER TESTING AND EVALUATION OF FLOW COAT EQUIPMENT AND LOWER STYRENE RESINS.  
 Employed Activity  
 W19 IMPLEMENTED SOME LOWER STYRENE RESIN WITH SOME AUTOMATED PROCESSES.  
 W49 IMPLEMENTED SOME LOWER STYRENE RESIN WITH SOME AUTOMATED PROCESSES.

**Barriers to P2:** F10 WOULD HAVE MET OUR OBJECTIVE BUT WE REPORTED USING NEW EMISSION FACTORS.

**Martin County, City of DUNNELL -- GLASSTITE, INC. -- ERCID -- 460200002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1995	26282	24,570	31,376	31,376	31,376	1997 23,967 1998 31,376	1998 / 1997 = 1.02	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1995	115879	86,643	156,162	156,162	156,162	1997 86,643 1998 156,162	1998 / 1997 = 1.02	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F09 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE FEASIBLE DUE TO PERMITTING REQUIREMENTS  
F10 STYRENE REPORTING FACTORS SUBSTANTIALLY INCREASED RELEASES FOR 1998.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1998 / 1997 = 1.02		
<i>Toluene</i>	1998	13732		13,732	13,732	13,732	1998	13,732	1998 / 1997 = 1.02	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W39 CONTINUE EMPLOYEE TRAINING FOR IMPROVED HANDLING OF PRODUCT TO REDUCE SPILLS.

Employed Activity

W39 CONTINUED EMPLOYEE TRAINING FOR IMPROVED HANDLING OF PRODUCT TO REDUCE SPILLS.

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W49 RESEARCHED OPTIONS FOR LOWER VOC PRODUCTS WITH VENDOR OF PRODUCT, BUT DETERMINED THAT IT WAS NOT A FEASIBLE OPTION BECAUSE IT WOULD AFFECT THE QUALITY OF OUR PRODUCT.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	20,049		
<i>Xylene (mixed isomers)</i>	1998	20049		20,049	20,049	20,049	1998	20,049	1998 / 1997 = 1.02	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W39 CONTINUE EMPLOYEE TRAINING FOR IMPROVED HANDLING OF PRODUCT TO REDUCE SPILLS.

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W39 CONTINUED EMPLOYEE TRAINING FOR IMPROVED HANDLING OF PRODUCT TO REDUCE SPILLS.

W49 RESEARCH OPTIONS FOR LOWER VOC PRODUCTS WITH VENDOR OF PRODUCT, BUT DETERMINED THAT IT WAS NOT A FEASIBLE OPTION BECAUSE IT WOULD AFFECT THE QUALITY OF OUR PRODUCT.

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	86000	105,000	104,000	100,000	100,000	1997 105,460 1998 102,690	1998 / 1997 = 1	No

- Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)
- Intended Activity  
W60 CHANGED TO MECHANICAL STRIPPING / CLEANING DEVICES (FROM SOLVENTS OR OTHER MATERIALS)  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)
- Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W42 SUBSTITUTED RAW MATERIALS
- Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

- Barriers to P2:**
- F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES
- F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE
- F10 PART OF PRODUCT LINE HAS BEEN CHANGED TO SOLVENT-FREE ADHESIVES. REMAINING PRODUCTS WILL REQUIRE NEW EQUIPMENT AND FUNDING WHICH HASN'T BEEN APPROVED DUE TO COST AND ECONOMIC CONDITIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluenediisocyanate (mixed isomers)</i>	1997	3500	3,500	1,700	2,000	2,000	1997 3,500 1998 1,700	1998 / 1997 = 0.8	Yes

- Process Code** P01 CASTING ANY MATERIAL
- Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Martin County, City of FAIRMONT -- WEIGH-TRONIX INC. -- ERCID -- 460350041**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1996	11462					1997 15,984 1998 14,803	1998 / 1997 = 0.84	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W71 INVESTIGATING OTHER CLEANERS AND DEGREASING SOLUTIONS.  
**Non Numeric Objective:** NONE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	25287					1997 34,638 1998 26,504	1998 / 1997 = 0.77	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
**Non Numeric Objective:** NONE AT THIS TIME.

**Non Numeric Progress:** AS A RESULT OF INCORPORATING HIGH SOLID PAINT IN LATE 1997, WE HAD A 24% REDUCTION OF THIS CHEMICAL.

**McLeod County, City of HUTCHINSON -- HUTCHINSON TECHNOLOGY, INC. -- ERCID -- 430550006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1996	12					1997 529 1998 319	1998 / 1997 = 0.73	No

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W58 OPTIMIZE SYSTEM TO IMPROVE CHLORINE INJECTION SO AS TO DECREASE USAGE.

**Non Numeric Objective:** RESEARCH ALTERNATE ETCHANT CHEMICALS. NO NUMERIC OBJECTIVE IS SET AS RELEASE IS THE RESULT OF CYLINDER CHANGE. ACTUAL AMOUNT IS DEPENDENT ON NUMBER OF CYLINDER CHANGES PER YEAR, DETERMINED BY CUSTOMER ORDERS.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1996	252000	244,000	232,000	226,000	224,000	1997 302,200 1998 231,270	1998 / 1997 = 0.73	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
Employed Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
**Process Code** P30 STRIPPING ANY COATING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W66 MODIFIED OR INSTALLED RINSE SYSTEMS  
W58

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1996	117000	67,000	7,000	6,650	6,300	1997 66,670 1998 34,430	1998 / 1997 = 0.73	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W71 SUBSTITUTED AQUEOUS CLEANER WITH PHOSPHORIC ACID TO OTHER AQUEOUS CLEANERS WITHOUT PHOSPHORIC ACID.  
Employed Activity  
W71 SUBSTITUTED AQUEOUS CLEANER WITH PHOSPHORIC ACID TO OTHER AQUEOUS CLEANERS WITHOUT PHOSPHORIC ACID.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**McLeod County, City of HUTCHINSON -- MINNESOTA MINING & MFG. - HUTCHINSON -- ERCID -- 430550003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony Compounds</i>	1990	654	160	150	140	130	1997 1,400 1998 450	1998 / 1997 = 0.97	No

**Process Code** P11 EXTRUDING ANY MATERIAL  
Intended Activity  
W90 NOT APPLICABLE  
Employed Activity  
W90 NOT APPLICABLE

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1997	5	5	4	3	2	1998 1	1998 / 1997 = 0.97	Yes

**Process Code** P11 EXTRUDING ANY MATERIAL  
Intended Activity  
W90 NOT APPLICABLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W90 NOT APPLICABLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1990	60500	11,000	9,500	7,800	6,000			Yes
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity W90	NOT APPLICABLE								
Employed Activity W90	NOT APPLICABLE								

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Cobalt</i>	1990	43000	8,000	6,800	5,600	4,300	10,000	9,600	1998 / 1997 = 0.71	No
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)									
Intended Activity W19	REDUCED PRODUCT CHANGEOVERS AND POUNDS PRODUCED.									

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Cyclohexane</i>	1990	326500	61,000	51,000	42,000	33,000	281,877	216,090	1998 / 1997 = 1	Yes
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)									
Intended Activity W58	SOLVENT RECOVERY. THERMAL OXIDATION.									
Employed Activity W58	SOLVENT RECOVERY. THERMAL OXIDATION.									

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1995	6400	4,100	3,000	1,800	600			No
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity									
W19	REDUCE PRODUCT CHANGEOVERS AND POUNDS PRODUCED.								
Employed Activity									
W19	REDUCE PRODUCT CHANGEOVERS AND POUNDS PRODUCED.								

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1990	3227	600	510	420	320	1997 4,100 1998 1,300	1998 / 1997 = 0.97	No
<b>Process Code</b> P11	EXTRUDING ANY MATERIAL								
Intended Activity									
W90	NOT APPLICABLE								
Employed Activity									
W90	NOT APPLICABLE								

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1990	401500	74,000	63,000	52,000	40,000	1997 1,725,100 1998 1,530,400	1998 / 1997 = 0.92	No
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity									
W58	THERMAL OXIDATION.								
W42	SUBSTITUTED RAW MATERIALS								
Employed Activity									
W42	SUBSTITUTED RAW MATERIALS								

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1990	16695000	1,000,000	2,624,000	2,147,000	1,670,000	1997 14,570,000 1998 14,309,000	1998 / 1997 = 0.98	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W19 REDUCE CHANGEOVERS AND QUANTITY COATED.  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W19 REDUCE CHANGEOVERS AND QUANTITY COATED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1990	32800	6,000	5,200	4,200	3,300	1997 14,680 1998 24,280	1998 / 1997 = 1.01	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W58 THERMAL OXIDATION.  
 Employed Activity  
 W19

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	126000	34,000	24,000	15,000	5,300	1997 252,570 1998 249,400	1998 / 1997 = 0.96	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W58 THERMAL OXIDATION.  
 Employed Activity  
 W58 THERMAL OXIDATION.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tert-butyl Alcohol</i>	1990	30400	5,600	4,800	3,900	3,000	1997 41,600 1998 117,500	1998 / 1997 = 0.98	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 W58 THERMAL OXIDATION.  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:**  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 NEW PRODUCTS CONTAINING CHEMICAL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1990	8989180	1,700,000	1,400,000	1,200,000	900,000	1997 9,701,000 1998 3,870,000	1998 / 1997 = 0.98	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W58 IMPROVED SCHEDULING AND SOLVENT RECOVERY EFFICIENCY.  
 W19 IMPROVED SCHEDULING AND SOLVENT RECOVERY EFFICIENCY  
 Employed Activity  
 W58 REDUCE CHANGEOVERS, SOLVENT RECOVERY AND THERMAL OXIDATION.  
 W19 IMPROVED SCHEDULING AND SOLVENT RECOVERY EFFICIENCY.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1990	117900	22,000	19,000	15,000	12,000	1997 90,700 1998 75,100	1998 / 1997 = 1	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W58 THERMAL OXIDIZATION.  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1990	6	1	1	1	1	1997 7 1998 5	1998 / 1997 = 0.97	No

- Process Code** P11 EXTRUDING ANY MATERIAL  
 Intended Activity  
 W90 NOT APPLICABLE  
 Employed Activity  
 W90 NOT APPLICABLE  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W90 NOT APPLICABLE  
 Employed Activity  
 W90 NOT APPLICABLE

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Meeker County, City of GROVE CITY -- PRECISION FIBERGLASS PRODUCTS LTD -- ERCID -- 470850004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1990	16388					1997 23,946 1998 25,167	1998 / 1997 = 0.86	No

- Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 W24 INSTITUTED BETTER LABELING PROCEDURES  
 Employed Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 W24 INSTITUTED BETTER LABELING PROCEDURES

**Non Numeric Objective:** INFORMAL GOAL TO REDUCE EMISSIONS BY 3%.

**Non Numeric Progress:** WE HAVE A GOOD TRAINING PROGRAM TO PREVENT SPILLS AND TO CLEAN- UP SPILLS.

- Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Meeker County, City of LITCHFIELD -- CUSTOM PRODUCTS, INC. -- ERCID -- 471000028**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1990						1997 3,230 1998 3,668	1998 / 1997 = 1.13	No

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:**

CHROMIUM IS A COMPOUND IN STEEL. OUR PRODUCTS ARE MADE OF STEEL. WE ARE ALWAYS LOOKING AT REPLACEMENT COMPONENTS, BUT STEEL IS REQUIRED FOR THE STRENGTH OF OUR PRODUCTS.

**Non Numeric Progress:**

UNTIL A REPLACEMENT IS FOUND FOR STEEL, OR STEEL IS MADE DIFFERENTLY, WE WILL CONTINUE TO HAVE A RELEASE OF CHROMIUM IN OUR MANUFACTURING PROCESS.

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1990						1997 641 1998 714	1998 / 1997 = 1.13	No

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:**

CONTINUE TO LOOK FOR OTHER MATERIALS FOR OUR PRODUCTS, BUT STEEL IS REQUIRED FOR THE STRENGTH OF OUR PRODUCTS. WE RELEASE MANGANESE DURING THE WELDING PROCESS.

**Non Numeric Progress:**

UNTIL A REPLACEMENT IS FOUND FOR STEEL, OR UNTIL STEEL IS MADE DIFFERENTLY, WE WILL CONTINUE TO HAVE A RELEASE OF MANGANESE IN OUR MANUFACTURING PROCESS.

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1990						1997 3,344 1998 3,760	1998 / 1997 = 1.13	No

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** NICKEL IS A COMPOUND IN STEEL. OUR PRODUCTS ARE MADE OF STEEL. WE ARE ALWAYS LOOKING AT REPLACING COMPONENTS, BUT STEEL IS REQUIRED FOR STRENGTH OF OUR PRODUCTS.

**Non Numeric Progress:** UNTIL A REPLACEMENT IS FOUND FOR STEEL, OR UNTIL STEEL IS MADE DIFFERENTLY, WE WILL CONTINUE TO HAVE A RELEASE OF NICKEL IN OUR MANUFACTURING PROCESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Meeker County, City of LITCHFIELD -- TOWMASTER INC. -- ERCID -- 47100037**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	14435	14,435	15,170	11,767	11,649	1997 14,435	1998 / 1997 = 1.31	Yes
							1998 12,814		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W74 IMPROVED APPLICATION TECHNIQUES  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W74 IMPROVED APPLICATION TECHNIQUES

**Mille Lacs County, City of PRINCETON -- SMITH SYSTEM MFG. CO. -- ERCID -- 48109003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	27000					1997 27,000	1998 / 1997 = 1.2	No
							1998 30,812		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED

**Non Numeric Objective:** EVALUATED DIFFERENT OPTIONS TO REDUCE OR ELIMINATE THE USE OF XYLENE. DECIDED TO CHANGE PAINTS (40-60% XYLENE) TO A HIGH SOLIDS PAINT (4-6%). THIS CHANGE WILL PROVIDE A SIGNIFICANT REDUCTION IN THE AMOUNT OF XYLENE RELEASED AND WASTE GENERATED.

**Non Numeric Progress:** NA

**Barriers to P2:** F10 DELAYS WERE ENCOUNTERED BEFORE THE NEW PAINT SYSTEM COULD BECOME OPERATIONAL.

**Mille Lacs County, City of PRINCETON -- WESTLING MFG. CO. -- ERCID -- 48109006**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Tetrachloroethylene</i>	1988	8192	1,100	1,000	1,000	1,000	1997 21,385 1998 11,982	1998 / 1997 = 0.9	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Morrison County, City of LITTLE FALLS -- LARSON GLASTRON BOATS, INC. -- ERCID -- 491200003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1994	168893					1997 249,631 1998 332,483	1998 / 1997 = 1.08	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** AS THE RESIN INFUSION AND VACUUM BAGGING METHODS ARE FURTHER PERFECTED, WE WILL BE INVESTIGATING WAYS TO INCORPORATE THEM IN OUR PRODUCT.

**Non Numeric Progress:** UNFORTUNATELY WE CANNOT MAKE ANY MORE PROGRESS TO REDUCE OUR EMISSIONS UNTIL THE RESIN INFUSION OR VACUUM BAGGING PROCESS IS FURTHER PERFECTED.

**Barriers to P2:**

F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1993	7311					1998 12,593	1998 / 1997 = 1.08	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Mower County, City of AUSTIN -- HORMEL FOODS CORPORATION -- ERCID -- 500150002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1997		
<i>Ammonia</i>	1991	48000	32,537	32,647	32,300	32,300	1998	32,647	1998 / 1997 = 1.22	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Nicollet County, City of NORTH MANKATO -- MICO, INC. -- ERCID -- 520650001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Dichloromethane</i>	1992	27007	25,000	11,500	10,700	10,200	1997	30,794	1998 / 1997 = 1.13	Yes
							1998	14,225		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W58 ALL PRODUCT SCHEDULED FOR CLEANING WILL BE ANALYZED TO DETERMINE IF CLEANING IS NECESSARY.  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 Employed Activity  
 W63 MODIFIED CONTAINMENT PROCEDURES FOR CLEANING UNITS  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

**Nicollet County, City of ST. PETER -- ALUMACRAFT BOAT CO. -- ERCID -- 520800001**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1998	13400					1998 13,400	1998 / 1997 = 1.24	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W19 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
 Employed Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W19 CONTINUED EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
**Non Numeric Objective:** HOPE TO REDUCE USAGE BY CONTINUING RESEARCH EFFORTS THROUGH TRADE JOURNALS AND COMMUNICATION WITH THOSE IN INDUSTRY.  
**Non Numeric Progress:** NA

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	16417	20,785	13,394	13,394	13,394	1997 14,702 1998 13,394	1998 / 1997 = 1.24	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W89 CONTINUE TO REDUCE THE NUMBER OF PRODUCTS REQUIRING SOLVENT CLEANING PRIOR TO PAINTING.  
 W42 SUBSTITUTED RAW MATERIALS  
 W19 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.  
 Employed Activity  
 W89 CONTINUED TO REDUCE THE NUMBER OF PRODUCTS REQUIRING SOLVENT CLEANING PRIOR TO PAINTING.  
 W42 SUBSTITUTED RAW MATERIALS  
 W19 CONTINUED EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.

**Nobles County, City of WORTHINGTON -- SWIFT & CO. -- ERCID -- 531500003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1997	47536					1997 47,536 1998 64,980	1998 / 1997 = 1.05	Yes

**Process Code** P26 REFRIGERATING/FREEZING  
 Intended Activity  
 W39 CONTAINED AMMONIA RECEIVER AND ACCUMULATORS IN CONCRETE BERMS.  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** AMMONIA DETECTION SYSTEM WAS INSTALLED, RELOCATED REFRIGERATION EQUIPMENT TO ONE LOCATION AT NORTH END OF BUILDING, ONGOING PREVENTATIVE MAINTENANCE AND PROCESS SAFETY MANAGEMENT, EMPLOYEE TRAINING, AND SEARCH FOR NEW EQUIPMENT.

**Non Numeric Progress:** THROUGH PREVENTATIVE MAINTENANCE PROGRAMS, CONTINUED MONITORING OF SYSTEM BY TRAINED EMPLOYEES, PROCESS SAFETY MANAGEMENT AND TRAINING OF EMPLOYEES, WE CAN KEEP FUGITIVE RELEASE TO A MINIMUM.

**Olmsted County, City of ROCHESTER -- ASSOCIATED MILK PRODUCERS, INC. -- ERCID -- 550950001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1995	4014	4,260	1,199	1,300	1,300	1997 126,499 1998 142,534	1998 / 1997 = 1.08	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 RECLAIMING ACID FOR RE-USE. IMPROVE OUR PH BALANCING SYSTEM

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>			1,408	533	600	600	1997 41,798 1998 56,236	1998 / 1997 = 1.08	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 RECLAIMING ACID FOR RE-USE. IMPROVE OUR PH BALANCING SYSTEM.

**Olmsted County, City of ROCHESTER -- CRENLO, INC. - PLANT 2 -- ERCID -- 550950004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1994	157274					1997 85,237 1998 85,265	1998 / 1997 = 0.93	Yes

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1994	33000					1997 35,355 1998 38,836	1998 / 1997 = 0.93	No

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	65000					1997 72,311 1998 60,706	1998 / 1997 = 0.93	Yes

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	50000					1997 45,782 1998 38,561	1998 / 1997 = 0.93	Yes

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Olmsted County, City of ROCHESTER -- INTERNATIONAL BUSINESS MACHINES CORP. -- ERCID -- 550950007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1997	9900					1997 9,900 1998 25,700	1998 / 1997 = 1.89	No

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity  
W90 NOT APPLICABLE  
Employed Activity  
W90 NOT APPLICABLE

**Non Numeric Objective:** OVER THE NEXT 3 YEARS, WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OF AQUEOUS AMMONIA OR RELEASES OF AMMONIA. IF AN ALTERNATIVE IS PROVEN TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998, IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE USE OF AQUEOUS AMMONIA AND AMMONIA RELEASES.

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1997	13500					1997 13,500 1998 13,290	1998 / 1997 = 0.94	No

**Process Code** P10 ELECTROPLATING

Intended Activity  
W90 NOT APPLICABLE  
Employed Activity  
W90 NOT APPLICABLE

**Process Code** P30 STRIPPING ANY COATING

Intended Activity  
W90 NOT APPLICABLE  
Employed Activity  
W90 NOT APPLICABLE

**Non Numeric Objective:** OVER THE NEXT 3 YEARS, WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OF COPPER COMPOUNDS OR RELEASES OF COPPER. IF AN ALTERNATIVE IS PROVEN TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998 IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE USE OF COPPER COMPOUNDS AND RELEASES OF COPPER.

**Barriers to P2:**  
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

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1997	54000					1997 54,000 1998 108,000	1998 / 1997 = 1.89	No

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity  
W90 NOT APPLICABLE

Employed Activity  
W90 NOT APPLICABLE

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
W90 NOT APPLICABLE

Employed Activity  
W90 NOT APPLICABLE

**Process Code** P30 STRIPPING ANY COATING

Intended Activity  
W90 NOT APPLICABLE

Employed Activity  
W90 NOT APPLICABLE

**Non Numeric Objective:** OVER NEXT 3 YEARS, WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OF NICKEL COMPOUNDS OR RELEASES OF NICKEL. IF AN ALTERNATIVE IS PROVEN TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998 IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE USE OF NICKEL COMPOUNDS AND RELEASES OF NICKEL.

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1997	330530					1998 683,000	1998 / 1997 = 1.89	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity  
W90 NOT APPLICABLE

Employed Activity  
W90 NOT APPLICABLE

**Process Code** P30 STRIPPING ANY COATING

Intended Activity  
W90 NOT APPLICABLE

Employed Activity  
W90 NOT APPLICABLE

**Non Numeric Objective:** OVER THE NEXT 3 YEARS,WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OF NITRATE COMPOUNDS OR RELEASES OF NITRATES.IF AN ALTERNATIVE IS PROVEN TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998 IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE USE OF NITRATE COMPOUNDS AND RELEASES OF NITRATE.

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	590					1997 371,110 1998 701,350	1998 / 1997 = 1.89	No

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W90 NOT APPLICABLE

Employed Activity

W90 NOT APPLICABLE

**Non Numeric Objective:** OVER THE NEXT 3 YEARS, WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OR RELEASES OF NITRIC ACID. IF AN ALTERNATIVE IS PROVEN TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998 IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE USE AND RELEASES OF NITRIC ACID.

**Barriers to P2:**  
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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1997	18530					1997 18,530 1998 38,630	1998 / 1997 = 1.89	No

**Process Code** P09 ELECTROLESS/IMMERSION COATING

Intended Activity

W90 NOT APPLICABLE

Employed Activity

W90 NOT APPLICABLE

**Process Code** P30 STRIPPING ANY COATING

Intended Activity

W90 NOT APPLICABLE

Employed Activity

W90 NOT APPLICABLE

**Non Numeric Objective:** OVER THE NEXT 3 YEARS, WILL CONTINUE TO REVIEW POTENTIAL TECHNICAL ALTERNATIVES TO FURTHER MINIMIZE USE OF ZINC COMPOUNDS OR RELEASES OF ZINC. IF ALTERNATIVE IS PROVEN TO BE TECHNICALLY AND ECONOMICALLY FEASIBLE, A NUMERIC GOAL WILL BE ESTABLISHED.

**Non Numeric Progress:** IN 1998 IBM REVIEWED POTENTIAL TECHNICAL ALTERNATIVES TO REDUCE THE USE OF ZINC COMPOUNDS AND RELEASES OF ZINC.

**Barriers to P2:**  
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

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1991	18033	1,572	1,067	2,100	2,100	1997 15,720 1998 10,672	1998 / 1997 = 0.93	Yes

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W58 PHOSPHORIC ACID IS NEUTRALIZED WITH BASE CLEANING MATERIALS. CONTINUOUSLY MONITOR THE PH TO MAKE SURE THE PROGRAM IS EFFECTIVE.

Employed Activity

W58 PHOSPHORIC ACID IS NEUTRALIZED WITH BASE CLEANING MATERIALS. CONTINUOUSLY MONITOR THE PH TO MAKE SURE THE PROGRAM IS EFFECTIVE.

**Olmsted County, City of ROCHESTER -- MARIGOLD FOODS, INC. -- ERCID -- 550950009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	15590					1997 15,590 1998 18,092	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W71

Employed Activity

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** MODERATE CHEMICAL REDUCTION BY USING AUTOMATIC DISPENSING UNIT THAT ADJUSTS TO SIZE OF TANK BEING WASHED AND DISPENSES CORRECT AMOUNT. SHOULD REDUCE CHEMICAL USAGE THROUGHOUT YEAR.

**Non Numeric Progress:** MODERATE CHEMICAL USAGE THROUGH AUTOMATIC DISPENSING UNIT ADJUSTING TO INDIVIDUAL SIZE OF TANK BEING CLEANED. CHEMICAL USAGE SHOULD BE LOWERED.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1997	13931					1997 13,931 1998 15,494	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W71

Employed Activity

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** MODERATE CHEMICAL REDUCTION BY USING AUTOMATIC DISPENSING UNIT THAT ADJUSTS TO SIZE OF TANK BEING WASHED AND DISPENSES CORRECT AMOUNT. SHOULD REDUCE CHEMICAL USAGE THROUGHOUT YEAR.

**Non Numeric Progress:** MODERATE CHEMICAL USAGE THROUGH AUTOMATIC DISPENSING UNIT ADJUSTING TO INDIVIDUAL SIZE OF TANK BEING CLEANED. CHEMICAL USAGE SHOULD BE LOWERED.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Olmsted County, City of ROCHESTER -- MARIGOLD FOODS, INC. -- ERCID -- 550950010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1998	10000					1998 11,600	1998 / 1997 = 1	No

**Process Code** P26 REFRIGERATING/FREEZING

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W33 INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** REPLACE RELIEF VALVE ON SYSTEM, REPLACE SEALS, GASKETS AND VALVE PACKING ON A MORE FREQUENT BASIS.

**Non Numeric Progress:** WE CONTINUE TO UPGRADE OUR AMMONIA SYSTEM WITH THE HELP OF OUR REFRIGERATION SERVICE SUPPLIERS.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1997	15000					1997 16,100 1998 20,304	1998 / 1997 = 1	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:** CONTINUE TO MONITOR CHEMICAL USAGE AND WASH CYCLES TO REDUCE CHEMICAL AMOUNTS USED THROUGHOUT THE YEAR. WILL BE WORKING CLOSELY WITH OUR CHEMICAL SUPPLIER TO CUT BACK ON CHEMICAL USAGE.

**Non Numeric Progress:** MONITOR CHEMICAL USAGE THROUGH RUNNING STRENGTH TESTS AND CLEANING TIMED CYCLES. CHANGED SOME OF THE PROCESS CYCLES AND CONTINUE TO GROW IN BUSINESS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Olmsted County, City of STEWARTVILLE -- HALCON CORP. -- ERCID -- 551150014**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	22491	22,491	11,037	11,037	11,037	1997 22,491 1998 11,037	1998 / 1997 = 1	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W58 CONTINUE TO RESEARCH BETTER EQUIPMENT
- W19 CONTINUE TO IMPROVE MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE.
- W81 CHANGED PRODUCT SPECIFICATIONS
- W78 CONTINUE TO RESEARCH BETTER APPLICATION PROCESSES

Employed Activity

- W71 CHANGED MATERIAL USED TO CLEAN SPRAY EQUIPMENT THAT HAS LOWER HAPS THUS LOWER TOLUENE RELEASES.
- W81 CHANGED PRODUCT SPECIFICATIONS
- W78 CONTINUE TO RESEARCH BETTER APPLICATION PROCESSES
- W58 CONTINUE TO RESEARCH BETTER EQUIPMENT
- W19 CONTINUE TO IMPROVE MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1997	33895	33,895	11,364	11,364	11,364	1997 33,895 1998 11,364	1998 / 1997 = 1	Yes

**Process Code** P21

Intended Activity

- W81 CHANGED PRODUCT SPECIFICATIONS
- W58 CONTINUED TO RESEARCH BETTER EQUIPMENT.
- W81 CHANGED PRODUCT SPECIFICATIONS
- W78 CONTINUE TO RESEARCH BETTER APPLICATION PROCESSES.
- W19 CONTINUE TO IMPROVE MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE.
- W58 CONTINUE TO RESEARCH BETTER EQUIPMENT
- W19 CONTINUE TO IMPROVE MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE

Employed Activity

- W71 CHANGED MATERIAL USED TO CLEAN SPRAY EQUIPMENT THAT HAS LOWER HAPS (THUS LOWER XYLENE RELEASES.
- W19 CONTINUED IMPROVEMENT OF MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE
- W81 CHANGED PRODUCT SPECIFICATIONS
- W19 CONTINUE TO IMPROVE MATERIAL MANAGEMENT WITH STRICT REGULATION OF MATERIAL USE AND HAZARDOUS WASTE.
- W71 CHANGED MATERIAL USED TO CLEAN SPRAY EQUIPMENT THAT HAS LOWER HAPS THUS LOWER TOLUENE RELEASES.
- W81 CHANGED PRODUCT SPECIFICATIONS
- W78 CONTINUED TO RESEARCH BETTER APPLICATION PROCESSES
- W58 CONTINUED TO RESEARCH BETTER EQUIPMENT.



**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W39 SPRING LOADED SHUTOFF VALVES TO BE INSTALLED ON DIP TANKS AND STORAGE TANKS TO REDUCE POTENTIAL SPILLAGE.  
 W49 CONTINUING RESEARCH TO FIND SUBSTITUTIONS FOR XYLENE BASED PRODUCTS.  
 Employed Activity  
 W89 AFTERBURNERS INSTALLED TO REDUCE EMISSIONS. WILL BE FULLY OPERATIONAL AS PRODUCT LINES BECOME ACTIVATED.  
 W49 CONTINUED RESEARCH TO FIND SUBSTITUTIONS FOR XYLENE BASED PRODUCTS.  
**Non Numeric Objective:** AFTERBURNERS THAT WERE INSTALLED IN 1998 THAT WE HOPE WILL REDUCE OUR EMISSIONS BY 25%. LOWER VOC'S WILL BE EMITTED FROM STACKS SO THAT WE KEEP INSIDE OUR PERMIT LIMITS.  
**Non Numeric Progress:** DUE TO THE NATURE OF THE PRODUCT, AND PRODUCTION INCREASES, REDUCTION WAS NOT FEASIBLE.  
**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Otter Tail County, City of FERGUS FALLS -- QUALITY CIRCUITS, INC. -- ERCID -- 561650055**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1997	26370					1997 29,174 1998 45,303	1998 / 1997 = 1.11	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
 Intended Activity  
 W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
 W67 IMPROVED RINSE EQUIPMENT DESIGN  
 Employed Activity  
 W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
 W67 IMPROVED RINSE EQUIPMENT DESIGN  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W58 MODIFICATIONS INCLUDE USE OF HANGING SACKS TO INCREASE DRAIN TIME FOR PARTS, REDUCING DRAGOUT AND SUBSEQUENT WASTE  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 W58 MODIFICATIONS INCLUDE USE OF HANGING SACKS TO INCREASE DRAIN TIME FOR PARTS, REDUCING DRAGOUT AND SUBSEQUENT WASTE  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:** REDUCE THE QUANTITY TRANSFERRED OR RELEASED AS A FUNCTION OF THE QUANTITY OF PRODUCT WE PRODUCE.

**Non Numeric Progress:** A NEW ETCHER INSTALLED IN 1997 REDUCED POTW COPPER LOAD AS WELL AS STACK EMISSIONS. PRE-CUT MATERIAL USED TO REDUCE THROWAWAY. NEW PLATING EQUIPMENT INSTALLED IN 1998 IMPROVED UNIFORMITY AND REDUCED DRAGOUT.

**Otter Tail County, City of NEW YORK MILLS -- LUND BOAT DIVISION -- ERCID -- 562510003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
1,1-dichloro-1-fluoroethane	1995	1252	1,406	1,491	1,580	1,675	1997	1,522	1998 / 1997 = 1.08	No
							1998	1,786		

**Process Code** P13 FOAM BLOWING  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 CURRENTLY NO SUITABLE ALTERNATIVE FOAMS ARE AVAILABLE WHICH WOULD MEET OUR NEEDS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
Toluene	1995	54815	54,266	53,723	51,186	50,674	1997	47,752	1998 / 1997 = 1.08	No
							1998	70,378		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W74 IMPROVED APPLICATION TECHNIQUES

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
Xylene (mixed isomers)	1995	34475	34,130	33,788	33,451	33,116	1997	26,673	1998 / 1997 = 1.08	No
							1998	47,353		

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W61 CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W74 IMPROVED APPLICATION TECHNIQUES

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Otter Tail County, City of PERHAM -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. -- ERCID -- 563190002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1996	40766					1998 4,239	1998 / 1997 = 1.08	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** TO CONTROL COMPOUND PRODUCTION, SOURCE CHEMICALS WILL BE USED ONLY AS REQUIRED BY FDA. EXCESSIVE USE OF COMPOUND TO BE AVOIDED. FACILITY WILL CONTINUE TO RESEARCH OPTIONS IN CHANGING EQUIPMENT, PROCESS OR CLEANING CHEMICALS USED TO REDUCE CHEMICAL.

**Non Numeric Progress:** CLEANING COMPOUNDS TREATED WITH PROCESS WASTE WHICH REMOVES NITROGEN AS BIOSOLIDS. TO CONTROL COMPOUND PRODUCTION SOURCE CHEMICAL WILL BE USED ONLY AS REQUIRED. WASTE-WATER TREATMENT PLANT WILL BE RUN AS EFFICIENTLY AS POSSIBLE.

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Pennington County, City of THIEF RIVER FALLS -- ARCTIC CAT, INC. -- ERCID -- 571150042**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1996	64000	65,000	75,000	80,000	85,000	1997 43,300 1998 91,700	1998 / 1997 = 0.5	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W89 ANNUAL REVIEW OF PRODUCTS FOR STYRENE CONTENT

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W19 GOOD HOUSEKEEPING PRACTICES SUCH AS DAILY CLEANUP AND ANNUAL INVENTORY CHECKS.  
Employed Activity  
W39 PROCESS SAFETY PROGRAM  
W19 GOOD HOUSEKEEPING PRACTICES SUCH AS DAILY CLEANUP AND ANNUAL INVENTORY CHECKS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE  
F10 CHANGE IN EMISSION FACTORS.

**Pipestone County, City of PIPESTONE -- US MARINE/BAYLINER -- ERCID -- 590750003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichloromethane</i>	1996	84000	77,337	0	0	0	1997 77,337		Yes
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Employed Activity									
W81	CHANGED PRODUCT SPECIFICATIONS								

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1996	190000	180,175	206,820	220,000	220,000	1997 180,175 1998 206,820	1998 / 1997 = 1.14	Yes
<b>Process Code</b> P12	FIBERGLASS PRODUCT MANUFACTURING								
Intended Activity									
W75	CHANGED FROM SPRAY TO OTHER SYSTEM								
W74	IMPROVED APPLICATION TECHNIQUES								

**Polk County, City of CROOKSTON -- AMERICAN CRYSTAL SUGAR CO. -- ERCID -- 600650006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1991	69300					1997 222,450 1998 276,316	1998 / 1997 = 1.3	No
<b>Process Code</b> P14	FOOD PROCESSING (HUMAN AND ANIMAL)								
Intended Activity									
W41	INCREASED PURITY OF RAW MATERIALS								

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** REDUCE AMINE CONTENT IN SUGAR BEETS.

**Non Numeric Progress:** CONTINUE GROWER PRACTICES PROGRAM.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Polk County, City of CROOKSTON -- PHOENIX INDUSTRIES OF CROOKSTON, LTD. -- ERCID -- 600650026**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Styrene	1993	17000					1997 56,242	1998 / 1997 = 1.51	Yes
							1998 91,640		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W49

W82 MODIFIED DESIGN OR COMPOSITION

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W42 SUBSTITUTED RAW MATERIALS

W49

**Non Numeric Objective:** CHANGES IN PROCESSING AND PROCESS MODIFICATIONS THROUGH INTERNAL POLLUTION PREVENTION AUDITS, PARTICIPATIVE TEAM MANAGEMENT, EMPLOYEE RECOMMENDATIONS (UNDER A FORMAL COMPANY PROGRAM) AND VENDOR AND OTHER ASSISTANCE AND RECOMMENDATIONS.

**Polk County, City of EAST GRAND FORKS -- AMERICAN CRYSTAL SUGAR CO. -- ERCID -- 600750002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Ammonia	1991	120000					1997 303,200	1998 / 1997 = 1.21	No
							1998 418,009		

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity

W41 INCREASED PURITY OF RAW MATERIALS

Employed Activity

W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** REDUCE AMINE CONTENT IN SUGAR BEETS.

**Non Numeric Progress:** CONTINUE GROWER PRACTICES PROGRAM.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Ramsey County, City of ARDEN HILLS -- GUIDANT/CPI -- ERCID -- 620050004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>2-chloro-1,1,1,2-tetrafluoroethane</i>	1996	10990	13,326	15,500	22,000	17,000	1997	13,326	1998 / 1997 = 1.32	Yes
							1998	15,302		

**Process Code** P29      STERILIZING (FUMIGATING, DISINFECTING, ETC.)  
 Intended Activity  
 W52                      MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W14                      CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Ramsey County, City of LAUDERDALE -- TWIN CITY DIE CASTING, INC. -- ERCID -- 620250001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Copper</i>	1991	6000					1997	10,356	1998 / 1997 = 1.07	No
							1998	12,088		

**Process Code** P01      CASTING ANY MATERIAL  
 Intended Activity  
 W42                      SUBSTITUTED RAW MATERIALS  
 W42                      SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W13                      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUED TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:**  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Ramsey County, City of MAPLEWOOD -- MODINE NORTH CENTRAL, INC. -- ERCID -- 620350040**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Copper</i>	1996	27	27	27	26	26	1997	4,107	1998 / 1997 = 0.95	No
							1998	4,332		

**Process Code** P18      MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity  
 W13                      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

**Ramsey County, City of NEW BRIGHTON -- MICOM CORP. -- ERCID -- 620450006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	216					1997 94,445	1998 / 1997 = 1	Yes
							1998 22,258		

**Process Code** P30 STRIPPING ANY COATING  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** INSTALLATION OF A NEW ETCHER IN 1998.

**Non Numeric Progress:** THE NEW ETCHER MACHINE PURCHASE HAS REDUCED THE AMMONIA RELEASED FROM 376 LBS. IN 1997 TO 156 LBS. IN 1998, WITH THE SAME WORK LOAD.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>							1997 96,654	1998 / 1997 = 0.69	Yes
							1998 31,283		

**Process Code** P10 ELECTROPLATING  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** FROM 1997 TO 1998, REDUCED COPPER IN OUR OUTGOING WASTEWATER FROM AN AVERAGE OF 2 PPM IN 1997 TO 1 PPM IN 1998.

**Non Numeric Progress:** MONITORING OF OUR ION EXCHANGE SYSTEM AND THE SOFT WATER THAT MAINTAINS THEIR LONG LIFE.

**Ramsey County, City of NEW BRIGHTON -- U.S. FILTER - JOHNSON SCREENS -- ERCID -- 620450016**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1996	82677					1997 77,185	1998 / 1997 = 0.93	No
							1998 75,373		

**Process Code** P11 EXTRUDING ANY MATERIAL

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 MATERIAL EXTRUDED IS CONSTANTLY MEASURED TO MINIMIZE AMOUNT OF SCRAP  
Employed Activity  
W58 MATERIAL EXTRUDED IS CONSTANTLY MEASURED TO MINIMIZE AMOUNT OF SCRAP  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
Employed Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)  
Intended Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNTS OF SCRAP FROM WELDING.  
Employed Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNTS OF SCRAP FROM WELDING.

**Barriers to P2:** F10 SCRAP WAS ABOVE AVERAGE DUE TO ERRORS IN A COUPLE JOBS. WATER RECYCLING SYSTEM IS CAUSING AN INCREASE IN OUR PPM OF METALS IN OUR WASTEWATER DUE TO LOWER WATER VOLUME.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	34236					1997 8,348	1998 / 1997 = 0.93	No
							1998 8,221		

**Process Code** P11 EXTRUDING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
Employed Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
Employed Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.  
**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)  
Intended Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNT OF SCRAP FROM WELDING  
Employed Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNT OF SCRAP FROM WELDING

**Barriers to P2:** F10 SCRAP WAS ABOVE AVERAGE DUE TO ERRORS IN A COUPLE JOBS. WATER RECYCLING SYSTEM IS CAUSING AN INCREASE IN OUR PPM OF METALS IN OUR WASTEWATER DUE TO LOWER WATER VOLUME.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1996						1997 31,919 1998 30,963	1998 / 1997 = 0.93	No

- Process Code** P11 EXTRUDING ANY MATERIAL
- Intended Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.
- Employed Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.
- Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)
- Intended Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.
- Employed Activity  
W58 MATERIAL AND PRODUCT BEING GROUND OR MACHINED IS MINIMIZED BY MAKING INITIAL MATERIALS AND PRODUCTS AS CLOSE TO REQUIRED SIZE AS POSSIBLE.
- Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)
- Intended Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNT OF SCRAP FROM WELDING
- Employed Activity  
W58 HAVE STRINGENT QUALITY PROGRAM THAT REDUCES AMOUNT OF SCRAP FROM WELDING

**Barriers to P2:** F10 SCRAP WAS ABOVE AVERAGE DUE TO ERRORS IN A COUPLE JOBS. WATER RECYCLING SYSTEM IS CAUSING AN INCREASE IN OUR PPM OF METALS IN OUR WASTEWATER DUE TO LOWER WATER VOLUME.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1996	78267					1997 73,050 1998 71,313	1998 / 1997 = 0.93	No

- Process Code** P11 EXTRUDING ANY MATERIAL
- Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 MATERIAL BEING EXTRUDED CONSTANTLY MEASURED TO MINIMIZE AMOUNT OF SCRAP.
- Employed Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W58 MATERIAL BEING EXTRUDED CONSTANTLY MEASURED TO MINIMIZE AMOUNT OF SCRAP.
- Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)
- Intended Activity  
W58 MATERIALS AND PRODUCT BEING MACHINED MINIMIZED BY MAKING INITIAL MATERIAL AND PRODUCT AS CLOSE TO REQUIRED SIZE AS POSSIBLE
- Employed Activity  
W58 MATERIALS AND PRODUCT BEING MACHINED MINIMIZED BY MAKING INITIAL MATERIAL AND PRODUCT AS CLOSE TO REQUIRED SIZE AS POSSIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)  
Intended Activity  
W58 STRINGENT QUALITY PROGRAM REDUCES AMOUNT OF SCRAP FROM WELDING  
Employed Activity  
W58 STRINGENT QUALITY PROGRAM REDUCES AMOUNT OF SCRAP FROM WELDING

**Barriers to P2:** F10 SCRAP WAS ABOVE AVERAGE DUE TO ERRORS IN A COUPLE JOBS. WATER RECYCLING SYSTEM IS CAUSING AN INCREASE IN OUR PPM OF METALS IN OUR WASTEWATER DUE TO LOWER WATER VOLUME.

**Ramsey County, City of NEW BRIGHTON -- WOLKERSTORFER CO., INC. -- ERCID -- 620450012**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	6640	10,122	13,165	10,066	9,060	1997 10,122	1998 / 1997 = 2.16	Yes
							1998 13,165		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W73 SUBSTITUTED COATING MATERIALS USED  
W19 INTENDED TO EMPLOY CROSS TRAINING FOR DIFFERENT PAINTING APPLICATIONS.  
Employed Activity  
W19 INTENDED TO EMPLOY CROSS TRAINING FOR DIFFERENT PAINTING APPLICATIONS.

**Ramsey County, City of ROSEVILLE -- ALLIEDSIGNAL INC. -- ERCID -- 620600001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1996	12629					1997 16,265	1998 / 1997 = 1.22	Yes
							1998 16,636		

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W58 MAXIMIZE SCRUBBER EFFICIENCY

**Non Numeric Objective:** ETCHING COPPER IS AN ESSENTIAL PART OF MAKING CIRCUIT BOARDS. MAXIMIZE CIRCUIT DENSITY TO EXTENT POSSIBLE. REDUCTION OF SCRAP REDUCES AMMONIA USE SO AN OBJECTIVE WAS ESTABLISHED TO REDUCE SCRAP.

**Non Numeric Progress:** AMMONIA RELEASES WERE REDUCED WHEN ACTIVITY INDEX IS ACCOUNTED FOR.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	211540					1997 624,963 1998 601,743	1998 / 1997 = 1.22	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
 Intended Activity  
 W58 MAXIMIZE THE WASTEWATER TREATMENT EFFICIENCY THROUGH CAREFUL MONITORING OF COPPER EFFLUENT.  
 Employed Activity  
 W58 MAXIMIZE THE WASTEWATER TREATMENT EFFICIENCY THROUGH CAREFUL MONITORING OF COPPER EFFLUENT.  
**Non Numeric Objective:** MAXIMIZES CIRCUIT DENSITY ON PRINTED CIRCUIT BOARDS TO EXTENT POSSIBLE TO REDUCE ETCHING OF COPPER AS MUCH AS POSSIBLE. ALL SCRAP AND WASTE ETCHANT RECYCLED TO RECOVER COPPER. MAXIMIZE EFFICIENCY OF WASTEWATER TREATMENT SYSTEM TO REDUCE RELEASES.  
**Non Numeric Progress:** THE COPPER RELEASED TO POTW WAS REDUCED WHEN THE ACTIVITY INDEX IS ACCOUNTED FOR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1997	21181					1997 21,181 1998 25,691	1998 / 1997 = 1.22	Yes

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
 Intended Activity  
 W58 FULLY IMPLEMENT THE NEW ELECTROLESS COPPER LINE  
**Non Numeric Objective:** BRING THE NEW ELECTROLESS COPPER PLATING LINE UP TO FULL PRODUCTION AND REDUCE GENERATION THROUGH MORE EFFICIENT PRODUCTION.  
**Non Numeric Progress:** GENERATION WAS REDUCED WHEN THE ACTIVITY INDEX WAS ACCOUNTED FOR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	71912					1997 42,722 1998 45,434	1998 / 1997 = 1.22	No

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Non Numeric Objective:** OBJECTIVE WAS TO MAXIMIZE THE BATH LIFE TO THE EXTENT POSSIBLE.  
**Non Numeric Progress:** NITRIC USE WAS INCREASED WHEN THE ACTIVITY INDEX WAS ACCOUNTED FOR.  
**Barriers to P2:** F10 SPECIFIC PRODUCTION PARAMETERS CHANGED IN 1998.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>							1997 7,094 1998 4,581	1998 / 1997 = 0.83	No

- Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)
- Intended Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- Employed Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)
- Intended Activity
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Employed Activity
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** WE ARE CHEMICAL DISTRIBUTOR. RELEASES ARE DEPENDENT ON THE VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** CHANGES TO PIPING HELPED TO REDUCE THE QUANTITY OF WASTE GENERATED. CHANGE IN THE ESTIMATING METHOD OF AIR EMISSIONS ACCOUNTED FOR THE INCREASE IN QUANTITY RELEASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>							1997 3,234 1998 1,660	1998 / 1997 = 0.98	No

- Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)
- Intended Activity
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Employed Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)
- Intended Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
  - W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- Employed Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** WE ARE CHEMICAL DISTRIBUTOR. RELEASES ARE DEPENDENT ON THE VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** CHANGES IN PIPING HELPED REDUCE THE QUANTITY OF WASTE GENERATED. CHANGE IN METHOD USED TO ESTIMATE AIR EMISSIONS ACCOUNTED FOR INCREASE IN QUANTITY RELEASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>							1998 1,029	1998 / 1997 = 1.2	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** WE ARE CHEMICAL DISTRIBUTOR. RELEASES ARE DEPENDENT ON VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** CHANGE IN THE ANALYSIS OF OUR WASTE STREAM LED TO INCREASE IN THE QUANTITY TREATED OFFSITE. CHANGE IN METHOD USED TO ESTIMATE AIR EMISSIONS LED TO INCREASE IN QUANTITY RELEASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>							1998 667	1998 / 1997 = 2.46	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** WE ARE A DISTRIBUTOR OF CHEMICALS. OUR RELEASES ARE DEPENDENT ON THE VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** AN INCREASE IN OUR SALES PLUS A CHANGE IN THE METHOD USED TO ESTIMATE OUR RELEASES LED TO AN INCREASE IN OUR EMISSIONS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>							1997 762	1998 / 1997 = 1.6	No
							1998 3,889		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** WE ARE CHEMICAL DISTRIBUTOR. OUR RELEASES ARE DEPENDENT ON VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** CHANGE IN THE ANALYSIS OF OUR WASTE STREAM LED TO INCREASE IN THE QUANTITY TREATED OFFSITE. CHANGE IN METHOD USED TO ESTIMATE AIR EMISSIONS LED TO INCREASE IN QUANTITY RELEASED.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>							1997 6,636	1998 / 1997 = 1	No
							1998 1,624		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** WE ARE CHEMICAL DISTRIBUTOR. OUR RELEASES ARE DEPENDENT ON VOLUME OF SALES TO OUR CUSTOMERS.

**Non Numeric Progress:** CHANGE IN THE ANALYSIS OF OUR WASTE STREAM ACCOUNTED FOR THE REDUCTION OF THE QUANTITY RECYCLED OFFSITE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Ramsey County, City of ROSEVILLE -- MULTILAYER TECHNOLOGY, INC. -- ERCID -- 620600083**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	13022	73,883	74,298				Yes	
<b>Process Code</b> P04	CHEMICAL MILLING (ETCHING)								
Intended Activity									
W52	MODIFIED EQUIPMENT, LAYOUT, OR PIPING								
W52	MODIFIED EQUIPMENT, LAYOUT, OR PIPING								
Employed Activity									
W19									
<b>Process Code</b> P09	ELECTROLESS/IMMERSION COATING								
Intended Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
<b>Process Code</b> P10	ELECTROPLATING								
Intended Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
W68	IMPROVED RINSE EQUIPMENT OPERATION								
<b>Process Code</b> P16	LAMINATING/PRESSING ANY MATERIAL								
Intended Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
<b>Process Code</b> P18	MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)								

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of ROSEVILLE -- PAPER, CALMENSON, & CO. -- ERCID -- 620600026**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Toluene</i>	1991	48600	20,000	22,000	22,000	22,000	20,825	11,190	1998 / 1997 = 1.03	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED

**Ramsey County, City of ROSEVILLE -- U.S. FILTER RECOVERY SERVICES INC. -- ERCID -- 620600023**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Ammonia</i>	1993	6934	6,617	6,280	5,972		1,476,556	1,318,163	1998 / 1997 = 1.03	No

**Process Code** P36 REGENERATION OF ETCHANT  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F10 SIGNIFICANT INCREASE IN SPECIFIC PRODUCT LINE PRODUCTION USING THIS CHEMICAL.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1993	150000	109,744	104,257	99,044		1997 70,255 1998 58,755	1998 / 1997 = 1.03	Yes

**Process Code** P36 METALS/RECOVERY, ETCHANT RECYCLING  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1995	33310	30,062	28,559	27,131		1997 12,000 1998 20,043	1998 / 1997 = 1.03	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of SHOREVIEW -- MULTI-CLEAN -- ERCID -- 620750017**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1991	180	4,870	5,104	5,000	5,220	1997 4,870 1998 5,104	1998 / 1997 = 1.06	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
 W42 SUBSTITUTED RAW MATERIALS  
 W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
 Employed Activity  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)



Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Di(2-ethylhexyl) Phthalate</i>	1988	0	0	0	0	0	1998 0	1998 / 1997 = 0.87	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W89 THERE ARE NO RELEASES OR TRANSFERS OF THIS CHEMICAL  
Employed Activity  
W89 THERE ARE NO RELEASES OR TRANSFERS OF THIS CHEMICAL

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1988	14600	6,935	5,840	20,615	20,615	1997 30,338 1998 19,580	1998 / 1997 = 0.87	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1988	6899	3,280	2,763	29,450	29,450	1997 24,598 1998 30,337	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Methanol</i>	1988	12000	5,700	4,800	10,580	10,580	1997	8,438	1998 / 1997 = 0.87	No
							1998	11,066		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

- Intended Activity W82 MODIFIED DESIGN OR COMPOSITION
- Employed Activity W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Methyl Ethyl Ketone</i>	1988	458500	217,800	183,400	423,500	423,500	1997	398,201	1998 / 1997 = 0.87	No
							1998	423,644		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

- Intended Activity W82 MODIFIED DESIGN OR COMPOSITION
- Employed Activity W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Methyl Isobutyl Ketone</i>	1988	62900	29,877	25,159	48,900	48,900	1997	43,035	1998 / 1997 = 0.87	No
							1998	49,832		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

- Intended Activity W82 MODIFIED DESIGN OR COMPOSITION
- Employed Activity W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1988				24,010	24,010	1997 21,210 1998 24,210	1998 / 1997 = 1.14	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1988	148380	70,484	59,350	91,100	91,100	1997 116,486 1998 91,598	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1988	2221248	399,127	138,824	2,051,000	2,051,000	1997 2,427,775 1998 2,172,674	1998 / 1997 = 0.88	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W82 MODIFIED DESIGN OR COMPOSITION  
 Employed Activity  
 W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluenediisocyanate (mixed isomers)</i>	1988	499	240	203	0	0	1997 0 1998 0	1998 / 1997 = 0.87	No

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W89 THERE ARE NO RELEASES OR TRANSFERS OF THIS CHEMICAL  
Employed Activity  
W89 THERE ARE NO RELEASES OR TRANSFERS OF THIS CHEMICAL

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1988	516650	245,407	206,658	143,700	143,700	218,308	1998 / 1997 = 0.88	No	
							143,447			

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W19 THERE HAS BEEN A DECREASE IN TAPE PRODUCTION  
Employed Activity  
W19 THERE HAS BEEN A DECREASE IN TAPE PRODUCTION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Zinc Compounds</i>	1988	1900	899	756	900	900	3,399	1998 / 1997 = 0.9	No	
							860			

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Ramsey County, City of ST. PAUL -- ADVANCE CORPORATION -- ERCID -- 620700356**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1996	41558							Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of ST. PAUL -- AMERICAN NATIONAL CAN CO. -- ERCID -- 620700003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1991	160000					1997 140,300 1998 142,804	1998 / 1997 = 0.82	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W74 IMPROVED APPLICATION TECHNIQUES  
W73 SUBSTITUTED COATING MATERIALS USED  
**Process Code** P24 PRINTING  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W74 IMPROVED APPLICATION TECHNIQUES

**Non Numeric Objective:** CONTINUE TO WORK TOWARDS DEVELOPING COATINGS WITH FEWER TRI CHEMICALS. THROUGH BETTER APPLICATION TECHNOLOGY, WE HOPE TO DECREASE THE QUANTITIES RELEASED.

**Non Numeric Progress:** SINCE 1991, A 25,402 POUND REDUCTION FROM BASELINE 1991 HAS OCCURRED. COMPANY CONTINUES TO TRY ALTERNATIVE PRODUCTS IN ORDER TO IMPROVE PERFORMANCE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1991	180					1997 75 1998 61	1998 / 1997 = 0.82	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W66 MODIFIED OR INSTALLED RINSE SYSTEMS  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W66 MODIFIED OR INSTALLED RINSE SYSTEMS  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** TRYING VARIOUS WASHER CHEMICALS WHICH MAY CAUSE LESS MANGANESE TO BE RELEASED FROM THE METAL.

**Non Numeric Progress:** A 128 POUND REDUCTION WAS ACHIEVED FROM THE BASELINE YEAR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1991	120000					1997 150,059 1998 114,193	1998 / 1997 = 0.82	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W74 IMPROVED APPLICATION TECHNIQUES

**Non Numeric Objective:** CONTINUE TO WORK TOWARDS DEVELOPING COATINGS WITH FEWER TRI CHEMICALS. THROUGH BETTER APPLICATION TECHNOLOGY, WE HOPE TO DECREASE THE QUANTITIES RELEASED.

**Non Numeric Progress:** SINCE 1991, A 11,847 POUND REDUCTION FROM BASELINE 1991 HAS OCCURRED. CONTINUE TO TRIAL ALTERNATIVE PRODUCTS. DUE TO THE FACT THAT NEW MATERIALS HAVE TO BE APPROVED BY THE CUSTOMER, NUMERIC OBJECTIVES CANNOT BE ESTABLISHED.

**Ramsey County, City of ST. PAUL -- ASHLAND CHEMICAL CO. -- ERCID -- 620700077**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1998	720					1998 719	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1995	21065					1997 1,478 1998 3,361	1998 / 1997 = 0.9	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1995	42213					1997 2,323 1998 5,720	1998 / 1997 = 0.9	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1995	4813					1997 908 1998 2,525	1998 / 1997 = 1.08	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1998	700					1998 709	1998 / 1997 =	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	12321					1997 1,613 1998 2,482	1998 / 1997 = 0.83	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1995	39211					1997 2,311 1998 9,630	1998 / 1997 = 1.24	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 Employed Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
 F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1995	37973					1997 2,636 1998 8,490	1998 / 1997 = 1.14	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 Employed Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** REPORTABLE CHEMICAL USAGE WILL CHANGE ANNUALLY BASED ON CUSTOMER DEMAND SINCE THIS FACILITY IS A CHEMICAL DISTRIBUTION SITE. MAIN WASTE CONTAINING TRI CHEMICALS IS LINE FLUSH WHICH WE HOPE TO REDUCE BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Non Numeric Progress:** THE FACILITY DID MEET ITS GOAL OF REDUCING LINE FLUSH BY 25% BY THE YEAR 2000, WITH 1994 AS A BASELINE.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 ONGOING GOOD MANAGEMENT PRACTICES TO REDUCE LINE FLUSH WHICH INCLUDES FILLING PRODUCTS FROM SIMILAR FAMILIES AFTER ONE ANOTHER AND SEGREGATION OF WASTE STREAMS FOR RECYCLE/REUSE.

**Ramsey County, City of ST. PAUL -- B. BROS. PKG., INC. DBA FOX PKG. CO. -- ERCID -- 620700241**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1994	59260					1997 96,400 1998 74,363	1998 / 1997 = 0.79	Yes

- Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)
- Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)
- Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of ST. PAUL -- CENTURY CIRCUITS & ELECTRONICS, INC. -- ERCID -- 620700011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	30000					1997 32,120 1998 19,021	1998 / 1997 = 1.25	Yes

- Process Code** P04 CHEMICAL MILLING (ETCHING)
- Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W82 MODIFIED DESIGN OR COMPOSITION
- Process Code** P10 ELECTROPLATING
- Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of ST. PAUL -- CMS HARTZELL MFG. CO. -- ERCID -- 620700105**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1991	10000	28,000	30,000	32,000	34,000	1997 18,404 1998 5,872	1998 / 1997 = 1	Yes

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W42 SUBSTITUTED RAW MATERIALS  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Ramsey County, City of ST. PAUL -- COOPERATIVE PLATING CO. -- ERCID -- 620700181**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1991	4570	4,637	4,155	4,000	4,000	1997 4,637 1998 4,340	1998 / 1997 = 0.96	Yes

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
 W58 REDUCED AMOUNT OF CYANIDE IN SHOP THROUGH ELIMINATING 1500 GALLON ZINC CYANIDE TANK WHICH ELIMINATES 2600 POUNDS PER YEAR.  
 Employed Activity  
 W64 IMPROVED DRAINING PROCEDURES  
 W68 IMPROVED RINSE EQUIPMENT OPERATION  
 W58 REDUCED AMOUNT OF CYANIDE IN SHOP THROUGH ELIMINATING 1500 GALLON ZINC CYANIDE TANK WHICH ELIMINATES 2600 POUNDS PER YEAR.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1994	710	720	710	700	700	1997 1,125 1998 925	1998 / 1997 = 0.93	Yes

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W58 A MORE EFFICIENT PRACTICE WITH ONE LINE VERSUS TWO  
 Employed Activity  
 W58 CONVERTED OVER TO ONE LINE WHICH MAY PUT US BELOW THRESHOLDS FOR FORM R.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	27530	23,130	22,030	20,000	20,000	1997 51,185 1998 59,224	1998 / 1997 = 1.11	Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
 Intended Activity  
 W19  
 W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
 Employed Activity  
 W22 BEGAN TO TEST OUTDATED MATERIAL - CONTINUE TO USE IF STILL EFFECTIVE  
 W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1996	950	950	950	900	900	1997 1,900 1998 2,150	1998 / 1997 = 1.13	Yes

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W58 REDUCE AMOUNT OF ZINC PLATING.  
 Employed Activity  
 W58 WITH THE MARKET OF ZINC PLATING BECOMING SATURATED WITH PLATERS, WE ELIMINATED A 1500 GALLON TANK.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1991						1997 59,800 1998 105,000	1998 / 1997 = 1.13	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Non Numeric Objective:** UNTIL 1997, THIS CHEMICAL HAD NOT BEEN REPORTABLE IN THE TRI REPORTING SINCE 1994, AND, THEREFORE, WAS NOT INCLUDED IN THE LAST REVISION OF THE POLLUTION PREVENTION PLAN.

**Non Numeric Progress:** UNTIL 1997, CHEMICAL HAD NOT BEEN REPORTABLE IN TRI REPORTING SINCE 1994, AND, THEREFORE, WAS NOT INCLUDED IN LAST REVISIONS OF THE POLLUTION PREVENTION PLAN. IN THE NEXT REVISION, THE CHEMICAL WILL LIKELY HAVE A NUMERIC OBJECTIVE.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1991	198999	277,100	282,700	252,400	252,400	1997 209,300 1998 250,000	1998 / 1997 = 1.13	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

Employed Activity

W42

SUBSTITUTED RAW MATERIALS

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 PRIME AND TOPCOAT PAINTS WITH THIS CHEMICAL AS A COMPONENT WERE USED IN 1998 BUT NOT 1997, OR HAD CHANGES IN THE CHEMICAL FORMULA TO INCLUDE THIS CHEMICAL. AS A RESULT, USE INCREASED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1991	3800					1997 9,300 1998 2,959	1998 / 1997 = 1.13	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W58

INSTALLED A SYSTEM TO REMOVE ANTIFREEZE FROM VEHICLES REQUIRING MODIFICATION, THEN BY FILTERING THE ANTIFREEZE, IT CAN BE RETURNED TO THE VEHICLE.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

W58 INSTALLED A SYSTEM TO REMOVE ANTIFREEZE FROM VEHICLES REQUIRING MODIFICATION, THEN BY FILTERING THE ANTIFREEZE, IT CAN BE RETURNED TO THE VEHICLE.

**Non Numeric Objective:** VOLUME USED IS BASED ON THE NUMBER OF VEHICLES PRODUCED. RELEASES OR TRANSFERS DEPEND ON NUMBER OF VEHICLES THAT REQUIRE REMOVAL OF THE CHEMICAL TO ALLOW FOR ENGINE MODIFICATIONS. COOLING TOWERS ARE SOMETIMES DRAINED AND REFILLED.

**Non Numeric Progress:** CONTINUALLY RESEARCHING INNOVATIVE PROCESSES TO IMPROVE QUALITY. IF ALTERNATIVE PROCESSES THAT ARE TECHNICALLY AND ECONOMICALLY FEASIBLE BECOME AVAILABLE, THEY WILL BE EVALUATED FOR POTENTIAL IMPLEMENTATION.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1991	134900	190,000	193,800	169,600	169,600	91,300	137,300	1998 / 1997 = 1.13	No

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W73 SUBSTITUTED COATING MATERIALS USED

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 CLEAR COAT AND E-COAT MATERIALS CONTAINING GLYCOL ETHERS HAD CHANGES IN THE CHEMICAL FORMULA WHICH DOUBLED THE GLYCOL ETHERS CONTENT. CHANGES DUE TO QUALITY CONTROL AND LEAD ELIMINATION.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methanol</i>	1991	53700	75,500	77,100	67,400	67,400	29,500	66,900	1998 / 1997 = 1.13	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 CLEAR COAT MATERIALS CONTAINED METHANOL IN 1998 (FOR QUALITY CONTROL). ADDITIONAL PRIMING MATERIALS USED IN 1998 WHICH WERE NOT USED IN PREVIOUS YEARS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1991	42500	59,500	60,600	53,100	53,100	1997 41,200 1998 28,800	1998 / 1997 = 1.13	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1991	197330	269,500	274,900	245,400	245,400	1997 196,003 1998 226,000	1998 / 1997 = 1.13	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 ADDITIONAL PRIMING MATERIALS USED IN 1998 WHICH WERE NOT USED IN PREVIOUS YEARS AND SOME HAD CHANGES WHICH INCREASED THE AMOUNT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1991	142500	200,400	204,400	178,900	178,900	1997 85,000 1998 163,000	1998 / 1997 = 1.13	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 CLEAR COAT MATERIALS CONTAINED N-BUTANOL IN 1998 (FOR QUALITY CONTROL). ADDITIONAL PRIMING MATERIALS USED IN 1998 WHICH WERE NOT USED IN PREVIOUS YEARS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	155979	217,500	221,900	194,200	194,200	1997 123,300 1998 120,000	1998 / 1997 = 1.13	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	829034	1,134,600	1,157,500	1,033,500	1,033,500	1997 1,164,000 1998 1,070,000	1998 / 1997 = 1.13	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Ramsey County, City of ST. PAUL -- GILLETTE CO. -- ERCID -- 620700025**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1996	3400	3,400	3,400	3,400	3,400	1997 2,700 1998 2,400	1998 / 1997 = 0.91	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 MAINTAIN LOW LEVEL OF RELEASES ACHIEVED THROUGH DESIGN MODIFICATIONS AND PROCESS IMPROVEMENTS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W58 MAINTAIN LOW LEVEL OF RELEASES ACHIEVED THROUGH DESIGN MODIFICATIONS AND PROCESS IMPROVEMENTS.  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W58 MAINTAIN LOW LEVEL OF RELEASES ACHIEVED THROUGH DESIGN MODIFICATIONS AND PROCESS IMPROVEMENTS.  
Employed Activity  
W58 MAINTAIN LOW LEVEL OF RELEASES ACHIEVED THROUGH DESIGN MODIFICATIONS AND PROCESS IMPROVEMENTS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Ramsey County, City of ST. PAUL -- HARCROS CHEMICALS -- ERCID -- 620700070**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1994	752	410	770	620	620	1998 770	1998 / 1997 = 2.59	No

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE  
F10 ONE SMALL ACCIDENTAL SPILL TO WASTEWATER TREATMENT.

**Ramsey County, City of ST. PAUL -- HAWKINS TERMINAL I -- ERCID -- 620700030**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1991	5	6	9	12	15	1997 93 1998 985	1998 / 1997 = 0.61	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, 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  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1996		5	5	5	10	1997 445	1998 / 1997 = 1.04	No
							1998 463		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dimethylamine</i>	1996	2000	2,000	2,000	2,000	0	1997 1,666	1998 / 1997 = 1.48	No
							1998 2,465		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1991	5	15	15	15	0	1997 12 1998 15	1998 / 1997 = 1.2	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1993	5	5	5	5	0	1997 29 1998 35	1998 / 1997 = 1.2	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1991	50	50	50	50	50	1997 350 1998 566	1998 / 1997 = 1.54	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Phosphoric Acid</i>	1991	5	5	5	5	5	195	226	1998 / 1997 = 0.44	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W29 MANUFACTURING MOVED TO DIFFERENT FACILITY, RESULTING IN FEWER BLENDS AND LOWER PRODUCT  
Employed Activity  
W29 MANUFACTURING MOVED TO DIFFERENT FACILITY, RESULTING IN FEWER BLENDS AND LOWER PRODUCT  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, 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

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Ramsey County, City of ST. PAUL -- MIXON, INC. -- ERCID -- 620700047**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Lead Compounds</i>	1991	144					1,485,112	887,112	1998 / 1997 = 0.92	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Ramsey County, City of ST. PAUL -- NORTH STAR STEEL-MINNESOTA -- ERCID -- 620700051**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1990	50000					1997 7,002 1998 8,451	1998 / 1997 = 0.94	No

**Process Code** P28 SMELTING  
Intended Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
Employed Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
**Process Code** P36 METAL SHREDDING  
Intended Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
Employed Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.

**Non Numeric Objective:** REDUCE THE CONTENT OF REPORTABLE METALS IN OUR RAW MATERIALS THROUGH EFFORTS TO CONTROL THE QUALITY OF RAW MATERIALS, SUPPLIER EDUCATION, PENALTIES TO SUPPLIERS, AND SAMPLE ANALYSIS. WORK WITH OTHER INDUSTRIES TO REDUCE CONTENT OF METALS.

**Non Numeric Progress:** IMPROVED CONCENTRATIONS IN THE FLUFF MATERIAL, PROMOTE EXPANDED AUTO RECYCLING AND REDUCTIONS IN TOXICS CONTENT PRIOR TO MATERIAL REACHING US. AFTER SHREDDING, PARTICLES CANNOT BE SEPARATED FROM OUR WASTE STREAM WITH EXISTING TECHNOLOGY.

**Barriers to P2:** F10 NO DIRECT CONTROL OVER THE BARIUM CONTENT IN THE RAW MATERIAL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1990	1300	820	820	820	820	1997 52,821 1998 55,552	1998 / 1997 = 0.94	Yes

**Process Code** P28 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
Employed Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
**Process Code** P36 METAL SHREDDING  
Intended Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.  
Employed Activity W58 RELEASES ARE MINIMIZED BY OUR AIR POLLUTION CONTROL SYSTEM.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1991	255	40	40	40	40	1997 64,691 1998 74,872	1998 / 1997 = 0.94	Yes

**Process Code** P28 SMELTING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
Employed Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
**Process Code** P36 METAL SHREDDING  
Intended Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.  
Employed Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1990	11900	8,600	8,600	8,600	8,600	1997 336,910 1998 346,664	1998 / 1997 = 0.94	Yes

**Process Code** P28 SMELTING  
Intended Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
Employed Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
**Process Code** P36 METAL SHREDDING  
Intended Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER  
Employed Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1990	13500	8,950	8,950	8,950	8,950	1997 573,123 1998 628,412	1998 / 1997 = 0.94	Yes

**Process Code** P28 SMELTING  
Intended Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
Employed Activity  
W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
**Process Code** P36 METAL SHREDDING  
Intended Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.  
Employed Activity  
W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Molybdenum Trioxide</i>	1994	5					1997 21 1998 19	1998 / 1997 = 0.94	Yes

**Process Code** P28

SMELTING

Intended Activity

W58

RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.

Employed Activity

W58

RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.

**Process Code** P36

METAL SHREDDING

Intended Activity

W58

RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER

Employed Activity

W58

RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR 1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.

**Non Numeric Objective:**

REDUCE THE CONTENT OF REPORTABLE METALS IN OUR RAW MATERIALS THROUGH EFFORTS TO CONTROL THE QUALITY OF RAW MATERIALS, SUPPLIER EDUCATION, PENALTIES TO SUPPLIERS, AND SAMPLE ANALYSIS. WORK WITH OTHER INDUSTRIES TO REDUCE CONTENT OF METALS.

**Non Numeric Progress:**

IMPROVED CONCENTRATIONS IN THE FLUFF MATERIAL, PROMOTE EXPANDED AUTO RECYCLING AND REDUCTIONS IN TOXICS CONTENT PRIOR TO MATERIAL REACHING US. AFTER SHREDDING, PARTICLES CANNOT BE SEPARATED FROM OUR WASTE STREAM WITH EXISTING TECHNOLOGY.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1990	1100	700	700	700	700	1997 5,367 1998 6,010	1998 / 1997 = 0.94	Yes

**Process Code** P28

SMELTING

Intended Activity

W58

RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.

Employed Activity

W58

RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.

**Process Code** P36

METAL SHREDDING

Intended Activity

W58

RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.

Employed Activity

W58

RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1990	86900	63,000	63,000	63,000	63,000	1997 3,267,686 1998 3,388,375	1998 / 1997 = 0.94	Yes

**Process Code** P28 SMELTING  
 Intended Activity W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE MELT SHOP.  
 Employed Activity W58 RELEASES FROM OUR METAL MELTING OPERATIONS ARE MINIMIZED BY OUR NEW AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.  
**Process Code** P36 METAL SHREDDING  
 Intended Activity W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER.  
 Employed Activity W58 RELEASES FROM METAL SHREDDING ARE MINIMIZED BY OUR \$1 MILLION AIR POLLUTION CONTROL SYSTEM FOR THE SHREDDER

**Ramsey County, City of ST. PAUL -- PLATING, INC. -- ERCID -- 620700054**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyanide Compounds</i>	1997	414					1997 414 1998 291	1998 / 1997 = 0.89	No

**Process Code** P10 ELECTROPLATING  
 Intended Activity W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 Employed Activity W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
**Non Numeric Objective:** CONVERTED ALL PLATING LINES BUT ONE TO NON-CYANIDE ZINC PLATING. CURRENTLY IT IS NOT FINANCIALLY FEASIBLE TO CONVERT THE LAST CYANIDE BATH OVER TO ALKALINE ZINC.  
**Non Numeric Progress:** TO REDUCE RELEASES, HAVE IMPROVED THE EFFLUENT ANALYSIS FROM THE ION EXCHANGE COLUMNS.  
**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
 F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Ramsey County, City of ST. PAUL -- QUEBECOR PRINTING ST. PAUL -- ERCID -- 620700193**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1994	19800					1997 18,889 1998 20,512	1998 / 1997 = 1.06	No

**Process Code** P24 PRINTING

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** LOOK FOR ALTERNATIVE MATERIALS WHICH ARE LESS TOXIC.

**Non Numeric Progress:** CONTINUED TO EVALUATE ALTERNATIVE MATERIALS WHICH ARE COMPATIBLE WITH THE PROCESS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Ramsey County, City of ST. PAUL -- SILGAN CONTAINERS MFG. CORP. -- ERCID -- 620700002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1995	49000					1997 91,200	1998 / 1997 = 1.02	No
							1998 92,013		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 OUR LAB WORKS WITH COATING SUPPLIERS TO GET COATINGS WITHOUT HAZARDOUS CHEMICALS THAT MEET OUR CUSTOMER REQUIREMENTS.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 OUR LAB WORKS WITH COATING SUPPLIERS TO GET COATINGS WITHOUT HAZARDOUS CHEMICALS THAT MEET OUR CUSTOMER REQUIREMENTS.

**Non Numeric Objective:** HARD TO ESTABLISH OBJECTIVE BECAUSE CUSTOMER NEEDS CONTINUE TO CHANGE AS TO WHAT COATINGS AND SOLVENTS ARE REQUIRED. THE TECHNICAL SERVICES DEPARTMENT CONTINUES TO TEST AND EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** TECHNOLOGY HAS NOT PROGRESSED TO THE POINT WHERE WE CAN ELIMINATE THIS CHEMICAL IN COATINGS AND STILL MEET CUSTOMER REQUIREMENTS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Ramsey County, City of ST. PAUL -- ST. PAUL BRASS FOUNDRY -- ERCID -- 620700065**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1993	100479	127,341	104,313	104,313	104,313	1997 127,341	1998 / 1997 = 0.87	Yes
							1998 104,313		

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity  
W58 CONTINUE TO REDUCE ANNUAL MELT LOSS AS PERCENTAGE OF METAL MELTED. HOPE TO REDUCE 1% METAL RELEASES PER YEAR BY TEMPERATURE CONTROL AND USE OF ADDITIVES.  
W19 CONTINUE EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity

- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W19 CONTINUED EMPLOYEE TRAINING IN PROPER JOB MANAGEMENT AND MATERIAL HANDLING.
- W58 CONTINUED TO REDUCE ANNUAL MELT LOSS AS PERCENTAGE OF METAL MELTED. HOPE TO REDUCE 1% METAL RELEASES PER YEAR.

**Ramsey County, City of ST. PAUL -- TAMOR CORPORATION -- ERCID -- 620700104**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1991	4908					1997 723 1998 1,777	1998 / 1997 = 0.89	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W19
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Non Numeric Objective:** CEASED OPERATIONS AND EXITED BUSINESS IN MARCH, 1999. STOPPED ALL GENERATION/RELEASE ACTIVITIES AT THAT TIME.

**Non Numeric Progress:** CEASED OPERATIONS AND EXITED BUSINESS IN MARCH, 1999. STOPPED ALL GENERATION/RELEASE ACTIVITIES AT THAT TIME.

**Ramsey County, City of ST. PAUL -- TI-KROMATIC PAINTS, INC. -- ERCID -- 620700071**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1994	2400	1,530	1,886	1,886	1,886	1997 1,530 1998 1,886	1998 / 1997 = 0.92	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W42 SUBSTITUTED RAW MATERIALS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Barriers to P2:** F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1994	3000	1,843	1,262	1,262	1,262	1997 1,843	1998 1,262	1998 / 1997 = 0.92	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W42 SUBSTITUTED RAW MATERIALS
- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.

Employed Activity

- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W42 SUBSTITUTED RAW MATERIALS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Isobutyl Ketone</i>	1994	4800	3,397	2,585	2,585	2,585	1997 3,577	1998 2,585	1998 / 1997 = 0.92	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W42 SUBSTITUTED RAW MATERIALS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1994	2400	1,332	736	736	736	1997 1,332 1998 736	1998 / 1997 = 0.92	Yes

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	7600	6,025	4,807	4,807	4,807	1997 6,025 1998 4,807	1998 / 1997 = 0.92	Yes

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W42 SUBSTITUTED RAW MATERIALS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W49 CONTINUE TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

Employed Activity

- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W42 SUBSTITUTED RAW MATERIALS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	10700	8,719	10,954	10,954	10,954	1997 8,719 1998 10,954	1998 / 1997 = 0.92	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W49 CONTINUED TO ENCOURAGE CUSTOMERS TO SWITCH TO WATER-BASED PAINT AND/OR HIGH SOLID COATING.
- W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

**Barriers to P2:** F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Ramsey County, City of ST. PAUL -- VIKING DRILL & TOOL INC. -- ERCID -- 620700369**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1997	13137	13,137	11,593	11,593	11,593	1997 13,137 1998 11,593	1998 / 1997 = 1.13	No

**Process Code** P15 HEAT TREATING

Intended Activity

- W39 RESPONSE TO POTENTIAL SPILLS WILL BE INVESTIGATED AND CORRECTIVE MEASURES TAKEN TO ELIMINATE PROBLEM. EMPLOYEES WILL BE TRAINED IN HAZARDOUS MATERIAL HANDLING AND STORAGE.
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING
- W31 IMPROVED STORAGE OR STACKING PROCEDURES

Employed Activity

- W39 RESPONSE TO POTENTIAL SPILLS WILL BE INVESTIGATED AND CORRECTIVE MEASURES TAKEN TO ELIMINATE PROBLEM. EMPLOYEES WILL BE TRAINED IN HAZARDOUS MATERIAL HANDLING AND STORAGE.
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 PRACTICAL ALTERNATIVES DO NOT EXIST.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1997	3476					1997 3,476 1998 5,513	1998 / 1997 = 1.13	No

**Process Code** P15 HEAT TREATING  
Intended Activity  
W39 EMPLOYEES WILL BE TRAINED IN MATERIAL HANDLING AND STORAGE.  
Employed Activity  
W39 EMPLOYEES WERE TRAINED IN MATERIAL HANDLING AND STORAGE  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** CHROMIUM IS A KEY CONSTITUENT OF OUR STOCK METAL. AS LONG AS IT REMAINS THE SAME, REDUCING THE USAGE WILL NOT BE FEASIBLE OR POSSIBLE.

**Non Numeric Progress:** CHROMIUM IS A KEY CONSTITUENT OF OUR STOCK METAL. AS LONG AS IT REMAINS THE SAME, REDUCING THE USAGE WILL NOT BE FEASIBLE OR POSSIBLE.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1997	22216	22,216	18,480	18,480	18,480	1997 104,346 1998 120,120	1998 / 1997 = 1.13	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W39 RESPONSE TO ANY POTENTIAL SPILLS WILL BE INVESTIGATED AND CORRECTIVE MEASURES TAKEN TO ELIMINATE THE PROBLEM. EMPLOYEES WILL BE TRAINED IN HAZARDOUS MATERIAL HANDLING AND STORAGE.  
W71 IMPROVING OPERATING PROCEDURES FOR DISTILLER TO LEAD TO HIGHER RECOVERY RATES AND REDUCING AMOUNT OF WASTE PRODUCED.  
Employed Activity  
W39 RESPONSE TO ANY POTENTIAL SPILLS WILL BE INVESTIGATED AND CORRECTIVE MEASURES TAKEN TO ELIMINATE THE PROBLEM. EMPLOYEES WILL BE TRAINED IN HAZARDOUS MATERIAL HANDLING AND STORAGE.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F10 THE DEGREASER WAS NOT INSTALLED IN 1998 BECAUSE IT WAS NOT ECONOMICALLY FEASIBLE. IT WILL BE INSTALLED IN 1999 AND WILL SIGNIFICANTLY REDUCE RELEASES.

**Ramsey County, City of ST. PAUL -- WALDORF CORP. (A ROCK-TENN COMPANY) -- ERCID -- 620700081**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	261695	110,000	110,000	110,000	110,000	1997 170,872 1998 126,389	1998 / 1997 = 0.81	Yes

**Process Code** P24 PRINTING  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W24 INSTITUTED BETTER LABELING PROCEDURES

**Ramsey County, City of ST. PAUL -- WORUM CHEMICAL AND FIBERGLASS -- ERCID -- 620700082**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1996	3811	3,600	3,400	3,200	3,000	1997 2,921 1998 3,113	1998 / 1997 = 0.77	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1996	11333	11,000	10,500	10,200	10,000	1997 10,670 1998 12,000	1998 / 1997 = 0.86	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W78 INSTALLED NITROGEN BLANKET SYSTEM TO REDUCE VAPORS IN BLEND TANKS. INSTALLED NITROGEN PORT ON BLEND TANKS TO REDUCE VAPORS.

**Barriers to P2:**

F10 INCREASE OF WASTE DRUMS INTO USABLE DRUMS INCREASES THE AMOUNT OF WASTE GENERATED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1996	16465	16,000	35,000	34,500	34,000	1997 37,950 1998 43,780	1998 / 1997 = 0.97	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 NEW PROCESS - PREVENTION PLAN WILL BE AMENDED TO REFLECT NEW OBJECTIVES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	18174	18,800	17,500	17,000	16,500	1997 16,377	1998 / 1997 = 1.29	No
							1998 18,782		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W73 SUBSTITUTED COATING MATERIALS USED  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:** F10 NEW PROCESS - PREVENTION PLAN WILL BE AMENDED TO REFLECT NEW OBJECTIVES. INCREASE OF DRUM RECONDITIONING HAS INCREASED OUR FLAMMABLE LIQUID WASTE.

**Ramsey County, City of VADNAIS HEIGHTS -- H.B. FULLER CO.-CORPORATE PILOT FACILITY -- ERCID -- 620850011**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1997	1	1	1	1	1	1997 6,826	1998 / 1997 = 0.42	No
							1998 2,899		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 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  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W24 INSTITUTED BETTER LABELING PROCEDURES  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
 Employed Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Activity  
 W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE  
 W24 INSTITUTED BETTER LABELING PROCEDURES  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:**

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  
 F10 SINCE IT IS PILOT FACILITY PRODUCTION AND USAGE IS TEMPORARY, FURTHER REDUCTION WOULD INVOLVE EXTENSIVE INVESTMENT WITH ANY GAIN TOO SMALL TO MEASURE.

**Ramsey County, City of VADNAIS HEIGHTS -- INTERPLASTIC CORP. -- ERCID -- 620850002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Methacrylate</i>	1991	854					1997 810 1998 618	1998 / 1997 = 0.81	Yes

**Process Code P02** CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W19 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.
- W39 CONTINUE TO REVIEW POLLUTION CONTROL OPTIONS AND USE GOOD OPERATING PRACTICES. SPILL PROCEDURES AND CONTAINMENT TO BE REVIEWED WITH PLANT PERSONNEL.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Employed Activity

- W39 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W19 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.

**Process Code P03** CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W39 REVIEWED SPILL PROCEDURES AND CONTAINMENT WITH PLANT PERSONNEL
- W19 CONTINUED USE OF GOOD OPERATING PRACTICES AND EVALUATED POLLUTION CONTROL ALTERNATIVES

Employed Activity

- W19 CONTINUED USE OF GOOD OPERATING PRACTICES AND EVALUATED POLLUTION CONTROL ALTERNATIVES
- W39 REVIEWED SPILL PROCEDURES AND CONTAINMENT WITH PLANT PERSONNEL

**Non Numeric Objective:** CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES THAT ARE ECONOMICAL, PRACTICAL AND TECHNOLOGICALLY FEASIBLE. CONTINUE USE OF GOOD OPERATING PRACTICES. CURRENT REDUCTION EFFORTS HAVE BEEN EXHAUSTED.

**Non Numeric Progress:** A DUCT SYSTEM, WHICH WOULD ALLOW A CENTRALIZED EMISSION POINT AND MAKE POTENTIAL POLLUTION CONTROL DEVICES POSSIBLE REMAINS IN USE. TRAINING ON SPILL PROCEDURES AND CONTAINMENT PERFORMED WITH PLANT PERSONNEL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1991	8855					1997 14,598 1998 11,357	1998 / 1997 = 0.81	Yes

**Process Code P02** CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W39 CONTINUE TO REVIEW POLLUTION CONTROL OPTIONS AND USE GOOD OPERATING PRACTICES. SPILL PROCEDURES AND CONTAINMENT TO BE REVIEWED WITH PLANT PERSONNEL.
- W19 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Employed Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W39 REVIEWED SPILL PROCEDURES AND CONTAINMENT WITH PLANT PERSONNEL.
- W19 CONTINUED USE OF GOOD OPERATING PRACTICES AND EVALUATED POLLUTION CONTROL ALTERNATIVES.

**Process Code** P03

CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W19 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.
- W39 CONTINUE TO REVIEW POLLUTION CONTROL OPTIONS AND USE GOOD OPERATING PRACTICES. SPILL PROCEDURES AND CONTAINMENT TO BE REVIEWED WITH PLANT PERSONNEL.

Employed Activity

- W39 CONTINUE TO REVIEW POLLUTION CONTROL OPTIONS AND USE GOOD OPERATING PRACTICES. SPILL PROCEDURES AND CONTAINMENT TO BE REVIEWED WITH PLANT PERSONNEL.
- W19 REDUCTION EFFORTS ASSOCIATED WITH IMPROVED OPERATING PRACTICES, INVENTORY CONTROL AND RAW MATERIAL MODIFICATIONS HAVE BEEN OPTIMIZED OR CONSIDERED UNFEASIBLE OPTIONS.

**Non Numeric Objective:**

CONTINUE INVESTIGATION OF POLLUTION CONTROL OR EMISSION REDUCTION ALTERNATIVES THAT ARE ECONOMICAL, PRACTICAL AND TECHNOLOGICALLY FEASIBLE. CONTINUE USE OF GOOD OPERATING PRACTICES. CURRENT REDUCTION EFFORTS HAVE BEEN EXHAUSTED.

**Non Numeric Progress:**

A DUCT SYSTEM, WHICH WOULD ALLOW A CENTRALIZED EMISSION POINT AND MAKE POTENTIAL POLLUTION CONTROL DEVICES POSSIBLE REMAINS IN USE. TRAINING ON SPILL PROCEDURES AND CONTAINMENT PERFORMED WITH PLANT PERSONNEL.

**Ramsey County, City of WHITE BEAR -- SCHWING AMERICA, INC. -- ERCID -- 620920001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	12,959		
Barium Compounds	1998	12959					1998	12,959	1998 / 1997 = 0.59	No

**Process Code** P21

ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.

Employed Activity

- W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.

**Non Numeric Objective:**

SALES DETERMINES THE NUMBER OF UNITS PRODUCED AND PAINT USED. CONTINUE USING LOW VOC COATINGS AND WORKING WITH VENDORS TO REDUCE POLLUTION. LOOKING INTO A SOLVENT RECYCLER.

**Non Numeric Progress:**

USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OHER RELATED PRODUCTS.

**Barriers to P2:**

F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1991	7379					1998 10,196	1998 / 1997 = 0.59	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.  
 Employed Activity  
 W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.  
**Non Numeric Objective:** SALES DETERMINES THE NUMBER OF UNITS PRODUCED AND PAINT USED. CONTINUE USING LOW VOC COATINGS AND WORKING WITH VENDORS TO REDUCE POLLUTION. LOOKING INTO A SOLVENT RECYCLER.  
**Non Numeric Progress:** USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OHER RELATED PRODUCTS.  
**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	31377					1997 20,391 1998 26,450	1998 / 1997 = 0.59	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.  
 Employed Activity  
 W89 USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OTHER RELATED PRODUCTS.  
**Non Numeric Objective:** SALES DETERMINES THE NUMBER OF UNITS PRODUCED AND PAINT USED. CONTINUE USING LOW VOC COATINGS AND WORKING WITH VENDORS TO REDUCE POLLUTION. LOOKING INTO A SOLVENT RECYCLER.  
**Non Numeric Progress:** USE OF LOW VOC COATINGS AND VENDORS HAVE REFORMULATED SOME OHER RELATED PRODUCTS.  
**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Ramsey County, City of WHITE BEAR LAKE -- KOHLER MIX SPECIALTIES -- ERCID -- 620950003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	1610					1997 17,710 1998 18,600	1998 / 1997 = 1.01	Yes

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W31 IMPROVED STORAGE OR STACKING PROCEDURES  
 Employed Activity  
 W24 INSTITUTED BETTER LABELING PROCEDURES  
**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1997	1940					1997 21,340 1998 12,600	1998 / 1997 = 1.01	Yes

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W24 INSTITUTED BETTER LABELING PROCEDURES  
**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Ramsey County, City of WHITE BEAR LAKE -- WATER GREMLIN CO. -- ERCID -- 620950030**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1998	1800000					1997 1,400,100 1998 1,500,100	1998 / 1997 = 1.04	Yes

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W19 LEAD HYGIENE AND REUSE OF LEAD MATERIAL. REDUCTION IN BYPRODUCT AND FEEDSTOCK.  
W49

**Non Numeric Objective:** AN OVERALL REDUCTION IN LEAD WOULD BE DETRIMENTAL TO OUR COMPANY GOALS. WILL CONTINUE TO IMPLEMENT METHODS OF POLLUTION PREVENTION, MAINTAIN POLLUTION CONTROL EQUIPMENT, OVERSEE HOUSEKEEPING, AND REUSE OF MATERIAL WHEREVER POSSIBLE.

**Non Numeric Progress:** REPORT THE SAME QUANTITY RELEASED AND RECYCLED OFF SITE AS IN 1997 DESPITE A PRODUCTION RATIO OF 3.6%.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1998	180000					1997 186,900 1998 154,500	1998 / 1997 = 1.04	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS  
W19 ENHANCED OUR COATING FILTERING SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
Employed Activity  
W19 ENHANCED OUR COATING FILTERING SYSTEM  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** INCORPORATE A VOC OXIDIZER BY 2001. CONTINUE TO EXPLORE NON-FLAMMABLE COATING ALTERNATIVES AND ENHANCE TRAINING OF PERSONNEL FOR SOLVENT MINIMIZATION.

**Non Numeric Progress:** BEGAN SELECTION PROCESS FOR A VOC OXIDATION SYSTEM. CONTINUED SEARCH FOR A NON-FLAMMABLE SOLVENT REPLACEMENT. ADDED RECIRCULATING TO ONE PROCESS.

**Renville County, City of RENVILLE -- SOUTHERN MN BEET SUGAR COOPERATIVE -- ERCID -- 651550009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>							1997 786,932 1998 136,790	1998 / 1997 = 0.99	No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W41 INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** ADVISE GROWERS TO MAXIMIZE BEET QUALITY AND YIELD. REFER TO PROGRESS REPORT FOR MORE DETAILS.

**Non Numeric Progress:** TRENDS IN RECENT YEARS HAVE SHOWN A GENERAL DECREASE IN THE ALPHA AMINO NITROGEN IN RAW SUGAR BEETS. CONSTRUCTING A WASTEWATER TREATMENT FACILITY WHICH IS EXPECTED TO REDUCE AMMONIA NITROGEN RELEASE.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Rice County, City of FARIBAULT -- CROWN CORK & SEAL CO. -- ERCID -- 660300017**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1995	17000	15,000	14,000	13,000	12,000	1997 12,900		No

**Process Code** P24 PRINTING  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Ethylbenzene</i>	1994	12300	11,000	10,500	9,000	8,500	1997	10,700		Yes

**Process Code** P24

PRINTING

Intended Activity

- W74 IMPROVED APPLICATION TECHNIQUES
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS
- W74 IMPROVED APPLICATION TECHNIQUES
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Glycol Ethers</i>	1991	130000	122,000	120,000	118,000	116,000	1997	130,000	1998 / 1997 = 1.02	No
							1998	34,100		

**Process Code** P24

PRINTING

Intended Activity

- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W74 IMPROVED APPLICATION TECHNIQUES
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE

Employed Activity

- W74 IMPROVED APPLICATION TECHNIQUES
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Methyl Isobutyl Ketone</i>	1991	73400	90,000	85,000	80,000	75,000	1997	87,000	1998 / 1997 = 0.99	Yes
							1998	78,000		

**Process Code** P24

PRINTING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>N-butyl Alcohol</i>	1991	36000	56,000	54,000	52,000	50,000	1997	68,800	1998 / 1997 = 1	Yes
							1998	53,600		

**Process Code** P24 PRINTING  
Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>N-hexane</i>	1995	51000	35,000	30,000	25,000	20,000	1997	63,000	1998 / 1997 = 0.38	No
							1998	24,000		

**Process Code** P24 PRINTING  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Xylene (mixed isomers)</i>	1991	49000	62,000	60,000	55,000	53,000	1997	156,000	1998 / 1997 = 1	Yes
							1998	145,000		

**Process Code** P24 PRINTING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W74 IMPROVED APPLICATION TECHNIQUES  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Rice County, City of FARIBAULT -- K & G MANUFACTURING -- ERCID -- 660300078**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1998	24420	0	0	0	0	1997 22,440	1998 / 1997 = 1.28	Yes
							1998 27,720		

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Rice County, City of FARIBAULT -- LAND O'LAKES, INC.-DAIRY PRODUCTION DIV. -- ERCID -- 660300003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1998	9668							No

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Employed Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** TO CONTROL NITRATE COMPOUND GENERATION, THE SOURCE CHEMICALS WILL BE USED ONLY AS REQUIRED BY FDA. CONTINUE TO RESEARCH OPTIONS IN CHANGING EQUIPMENT, PROCESSES, OR CLEANING CHEMICALS IN ORDER TO REDUCE CHEMICAL GENERATION.

**Non Numeric Progress:** TO CONTROL NITRATE COMPOUND GENERATION, THE SOURCE CHEMICALS WILL BE USED ONLY AS REQUIRED BY FDA. CONTINUE TO RESEARCH OPTIONS IN CHANGING EQUIPMENT, PROCESSES, OR CLEANING CHEMICALS IN ORDER TO REDUCE CHEMICAL GENERATION.

**Barriers to P2:**

**Rice County, City of FARIBAULT -- MCQUAY INTERNATIONAL -- ERCID -- 660300004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1992	10058					1997 13,465		Yes

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)

Intended Activity

W78

Employed Activity

W78

**Non Numeric Objective:** ON 7-1-98, THE PAINT OPERATION CEASED AND ITS REMOVAL FROM THE FACILITY STARTED. THIS RESULTED IN AN 85% REDUCTION IN EMISSIONS OVER THE LAST SEVERAL YEARS.

**Non Numeric Progress:** ON 7-1-98, THE PAINT OPERATION CEASED, APPROXIMATELY FOUR MONTHS PRIOR TO THE DATE THAT WAS INITIALLY ESTABLISHED. REMOVAL REDUCED THE AMOUNT OF EMISSIONS BY 75% BEGINNING IN 1999.

**Rice County, City of NORTHFIELD -- SHELDAHL, INC. - EAST FACILITY -- ERCID -- 660600002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1997	88630					1997 88,630 1998 94,664	1998 / 1997 = 1.14	Yes

**Process Code** P04 CHEMICAL MILLING (ETCHING)

Intended Activity

W51

Employed Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

INSTITUTED RECIRCULATION WITHIN A PROCESS

**Non Numeric Objective:** INVESTIGATE USE OF A WATER TREATMENT SYSTEM TO RECOVER AMMONIA FOR RECYCLING AND REUSE. ON AN ANNUAL BASIS, CONDUCT POLLUTION PREVENTION TRAINING FOR WET PROCESS OPERATORS. REVIEW OF OTHER ETCHING SYSTEMS HAS SHOWN NOT TO BE ECONOMICALLY VIABLE.

**Non Numeric Progress:** LITERATURE SEARCH CONDUCTED FOR AMMONIA REMOVAL STUDIES. USE OF MEMBRANE SEPARATION THROUGH REVERSE OSMOSIS IDENTIFIED AS A CANDIDATE FOR REMOVAL AND CONCENTRATION OF AMMONIA FROM WASTEWATERS. P2 TRAINING COMPLETED FOR WET PROCESS OPERATORS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Antimony</i>	1997	4150							Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** ON ON-GOING BASIS, WILL CONTINUE RESEARCH TO IDENTIFY COST EFFECTIVE SUBSTITUTES FOR FLAME RETARDANTS.

**Non Numeric Progress:** PRODUCTS WILL BE EVALUATED ON CASE-BY-CASE BASIS TO SEE WHERE USE OF ANTIMONY CAN BE REDUCED WHERE PRICE AND COST EXPECTATIONS CAN BE MET.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1997	925357					1997 925,357 1998 917,523	1998 / 1997 = 1.14	Yes

**Process Code** P10 ELECTROPLATING

Intended Activity

W58

ADDITIVE ELECTROPLATING PROCESS

Employed Activity

W58

INCREASE IN PRODUCT SALES OF NOVACLAD MATERIALS

**Non Numeric Objective:** ON ON-GOING BASIS, WILL CONTINUE RESEARCH AND DEVELOPMENT EFFORTS TO REDUCE USE OF COPPER IN THE MANUFACTURE OF FLEXIBLE CIRCUITS. NO ECONOMICALLY VIABLE ALTERNATIVE HAS BEEN IDENTIFIED.

**Non Numeric Progress:** THE NOVACLAD PROCESS, ADDITIVE IN NATURE, MADE UP 16% SALES VOLUME INCREASE IN 1998. THIS HAS ADDED TO OVERALL COPPER USE SINCE APPLICATIONS ARE DIFFERENT FROM STANDARD COPPER LAMINATE CIRCUIT PRODUCTS. PRODUCTS EVALUATED ON A CASE-BY-CASE BASIS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Decabromodiphenyl Oxide</i>	1997	8640					1997 8,640 1998 6,240	1998 / 1997 = 1.02	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** ON ON-GOING BASIS, WILL CONTINUE RESEARCH TO IDENTIFY COST EFFECTIVE SUBSTITUTES FOR FLAME RETARDANTS.

**Non Numeric Progress:** PRODUCTS WILL BE EVALUATED ON CASE-BY-CASE BASIS TO SEE WHERE USE CAN BE REDUCED AND WHERE PRICE AND COST EXPECTATIONS CAN BE MET.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1996	28410	28,125	25,000	25,000	25,000	1997 10,550 1998 9,600	1998 / 1997 = 1.14	Yes

**Process Code** P10 ELECTROPLATING

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

Employed Activity

W42

SUBSTITUTED RAW MATERIALS

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Intended Activity

W58

TIN TO BE USED AS REPLACEMENT FOR TIN/LEAD SOLDER AS ETCH RESIST WHERE TECHNOLOGICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W58

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1997	24750					1997 24,750 1998 19,435	1998 / 1997 = 1.02	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W71

**Non Numeric Objective:** ON ANNUAL BASIS, WILL CONDUCT POLLUTION PREVENTION TRAINING FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. EVALUATE USE OF ALTERNATIVES TO SOLVENT CLEANING SYSTEMS FOR ADHESIVE CLEAN-UP.

**Non Numeric Progress:** 1) POLLUTION PREVENTION TRAINING COMPLETED IN1998 FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. (2) EVALUATED CARBON DIOXIDE PELLET SYSTEM FOR FEASIBILITY IN CLEAN UP. ON-SITE EVALUATION PROVED PROCESS TOO SLOW AND NOT COST EFFECTIVE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1997	346000					1997 346,000 1998 313,061	1998 / 1997 = 1.02	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W71

**Non Numeric Objective:** ON ANNUAL BASIS, WILL CONDUCT POLLUTION PREVENTION TRAINING FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. EVALUATE USE OF ALTERNATIVES TO SOLVENT CLEANING SYSTEMS FOR ADHESIVE CLEAN-UP.

**Non Numeric Progress:** POLLUTION PREVENTION TRAINING COMPLETED IN 1998 FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. EVALUATED CARBON DIOXIDE PELLET SYSTEM TO DETERMINE IF ITS FEASIBLE FOR CLEAN UP OPERATIONS. ON-SITE EVALUATION PROVED PROCESS TOO SLOW AND NOT COST EFFECTIVE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1997	32295							Yes

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)  
Intended Activity  
W58  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS  
W58

**Non Numeric Objective:** NITRATES PRIMARILY PRODUCED THROUGH NEUTRALIZATION OF NITRIC ACID WASTE WATER. OBJECTIVES FOR POLLUTION PREVENTION FOLLOW NITRIC ACID REDUCTION ACTIVITIES.

**Non Numeric Progress:** SIGNIFICANT REDUCTION IN LEAD PLATING WITH TIN PLATING AS SUBSTITUTE. NITRIC ACID USED TO STRIP TIN. WATER RELEASES TREATED AND NEUTRALIZED IN ON-SITE SYSTEM. ION EXCHANGE RESIN IN WATER TREATMENT SYSTEM REPLACED 12/98. GREATLY REDUCED NITRIC ACID.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1997	168170					1997 168,170	1998 / 1997 = 1.48	Yes
							1998 86,663		

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Intended Activity

W58

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

W58

**Non Numeric Objective:** CONTINUE RESEARCH TO REDUCE AND ELIMINATE USE OF LEAD FOR PLATING AND OTHER SURFACE PREPARATIONS OF FLEXIBLE CIRCUITS. THIS MUST BE DONE TO ELIMINATE USE OF NITRIC ACID IN LEAD ION EXCHANGE COLUMN REGENERATION.

**Non Numeric Progress:** SIGNIFICANT REDUCTION IN LEAD PLATING WITH TIN PLATING AS SUBSTITUTE. NITRIC ACID USED TO STRIP TIN. WATER RELEASES TREATED AND NEUTRALIZED IN ON-SITE SYSTEM. ION EXCHANGE RESIN IN WATER TREATMENT SYSTEM REPLACED 12/98. GREATLY REDUCED NITRIC ACID.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1997	688900					1997 688,900	1998 / 1997 = 1.02	Yes
							1998 773,891		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W71

**Non Numeric Objective:** ON ANNUAL BASIS, WILL CONDUCT POLLUTION PREVENTION TRAINING FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. EVALUATE USE OF ALTERNATIVES TO SOLVENT CLEANING SYSTEMS FOR ADHESIVE CLEAN-UP.

**Non Numeric Progress:** POLLUTION PREVENTION TRAINING COMPLETED IN 1998 FOR ALL LAMINATIONS DEPARTMENT EMPLOYEES. EVALUATED CARBON DIOXIDE PELLET SYSTEM TO DETERMINE IF ITS FEASIBLE FOR CLEAN UP OPERATIONS. ON-SITE EVALUATION PROVED PROCESS TOO SLOW AND NOT COST EFFECTIVE.

**Roseau County, City of ROSEAU -- POLARIS INDUSTRIES, INC. -- ERCID -- 681550001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1995	21000	13,000	18,000	13,000	10,000	1997 13,000	1998 / 1997 = 1.03	No
							1998 18,000		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1994	49000	34,800	41,100	36,000	24,000	1997 34,800 1998 41,100	1998 / 1997 = 0.9	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	36000					1997 24,680 1998 21,960	1998 / 1997 = 0.9	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
W42 SUBSTITUTED RAW MATERIALS  
W74 IMPROVED APPLICATION TECHNIQUES  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Non Numeric Objective:** REDESIGNED OUR UNITS TO REDUCE THE NUMBER OF PARTS PAINTED. EXPERIMENTING WITH HIGHER SOLID PAINTS. LOOKING INTO TRAINING THE EMPLOYEES WHO DO THE SPRAY PAINTING WITH LASER TECHNOLOGY FOR BETTER PAINT APPLICATION AND LESS OVERSPRAY.

**Non Numeric Progress:** MODIFIED THE SPRAY PAINT SYSTEM TO HELP REDUCE THE NUMBER OF PARTS TO BE REWORKED/REPAINTED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	110000					1997 16,800 1998 11,400	1998 / 1997 = 0.9	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W74 IMPROVED APPLICATION TECHNIQUES  
W42 SUBSTITUTED RAW MATERIALS  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Non Numeric Objective:** REDESIGNED OUR UNITS TO REDUCE THE NUMBER OF PARTS PAINTED. EXPERIMENTING WITH HIGHER SOLID PAINTS. LOOKING INTO TRAINING THE EMPLOYEES WHO DO THE SPRAY PAINTING WITH LASER TECHNOLOGY FOR BETTER PAINT APPLICATION AND LESS OVERSPRAY.

**Non Numeric Progress:** MODIFIED THE SPRAY PAINT SYSTEM TO HELP REDUCE THE NUMBER OF PARTS TO BE REWORKED/REPAINTED.

**Scott County, City of SAVAGE -- SILGAN CONTAINERS MFG. CORP. -- ERCID -- 700820004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
1,2,4-trimethylbenzene	1998	33978					1998 33,977	1998 / 1997 =	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 WORKING WITH OUR SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Ethylbenzene	1991						1997 23,200 1998 32,769	1998 / 1997 = 0.22	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 WORKING WITH OUR SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1989						1997 298,200 1998 274,811	1998 / 1997 = 0.42	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W89 TECHNICAL SERVICES DEPARTMENT CONSTANTLY WORKING WITH SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.

Employed Activity

W89 TECHNICAL SERVICES DEPARTMENT CONSTANTLY WORKING WITH SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1991						1997 21,100 1998 18,248	1998 / 1997 = 0.57	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 WORKING WITH SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1991						1997 52,900	1998 / 1997 = 2.2	No
							1998 70,079		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS MATERIAL.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W89 WORKING WITH OUR SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1989						1997 27,200	1998 / 1997 = 0.93	No
							1998 16,699		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

Employed Activity

W89 WORKING WITH SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991						1997 284,900	1998 / 1997 = 0.16	No
							1998 160,966		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W89 CONSTANTLY WORKING WITH COATING SUPPLIERS TO DERIVE COATINGS WITH NO OR REDUCED HAZARDOUS COMPONENTS.

Employed Activity

W89 WORKING WITH SUPPLIERS TO FIND NON-HAZARDOUS COATINGS.  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** TYPES OF SOLVENTS AND COATINGS USED DETERMINED BY CUSTOMER REQUIREMENT WHICH ARE DRIVEN BY THE CONTENT OF AGRICULTURAL PRODUCT BEING PROCESSED. WORKING WITH OUR COATING SUPPLIERS TO EVALUATE COATINGS WITH LOWER EMISSIONS.

**Non Numeric Progress:** CUSTOMER REQUIREMENTS FOR PRODUCT LINE MAKE CHANGE TO DIFFERENT LOWER HAZARDOUS CHEMICAL COATING DIFFICULT. WE ARE SLOWLY MAKING PROGRESS IN CONVERTING TO WATER BASED COATINGS AND COMPOUNDS.

**Barriers to P2:**  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Scott County, City of SHAKOPEE -- ADC TELECOMMUNICATIONS -- ERCID -- 700850057**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1995	430916					1997 469,634	1998 / 1997 = 1.39	No
							1998 650,914		

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W58 EFFORTS TO MAXIMIZE OPERATIONS AND REDUCE WASTE ARE ONGOING

Employed Activity

W58 EFFORTS TO MAXIMIZE OPERATIONS AND REDUCE WASTE ARE ONGOING

**Non Numeric Objective:** NO SUBSTITUTE MATERIALS HAVE BEEN FOUND. MAXIMIZE OPERATIONS AND RECYCLE ALL WASTE GENERATED.

**Non Numeric Progress:** NO SUBSTITUTE MATERIALS HAVE BEEN FOUND. MAXIMIZE OPERATIONS AND RECYCLE ALL WASTE GENERATED.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methylene Chloride</i>	1988	37609							No
<b>Process Code</b> P05	CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)								
Intended Activity									
W59	MODIFIED STRIPPING / CLEANING EQUIPMENT								
Employed Activity									
W59	MODIFIED STRIPPING / CLEANING EQUIPMENT								
<b>Non Numeric Objective:</b>	ONGOING EVALUATION OF ALTERNATIVE CLEANING SOLVENTS.								
<b>Non Numeric Progress:</b>	ONGOING EVALUATION OF ALTERNATIVES FOR EQUIPMENT AND SOLVENTS.								
<b>Barriers to P2:</b>	F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE F10 SPECIFIC LIMITATIONS HINDER THE ABILITY TO INSTALL AN AQUEOUS WASHING SYSTEM.								

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1995	35353					1997 47,126 1998 53,224	1998 / 1997 = 1.13	No
<b>Process Code</b> P18	MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)								
Intended Activity									
W58	EFFORTS TO MAXIMIZE OPERATIONS AND REDUCE WASTE ARE ONGOING								
Employed Activity									
W58	EFFORTS TO MAXIMIZE OPERATIONS AND REDUCE WASTE ARE ONGOING								
<b>Non Numeric Objective:</b>	NO SUBSTITUTE MATERIALS HAVE BEEN FOUND. MAXIMIZE OPERATIONS AND RECYCLE ALL WASTE GENERATED.								
<b>Non Numeric Progress:</b>	NO SUBSTITUTE MATERIALS HAVE BEEN FOUND. MAXIMIZE OPERATIONS AND RECYCLE ALL WASTE GENERATED.								
<b>Barriers to P2:</b>	F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE								

**Scott County, City of SHAKOPEE -- CONKLIN COMPANY, INC. -- ERCID -- 700850006**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1993	545	2,500	2,000	2,000		1997 2,439 1998 2,422	1998 / 1997 = 0.82	No
<b>Process Code</b> P02	CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)								
Intended Activity									
W42	SUBSTITUTED RAW MATERIALS								
Employed Activity									
W42	SUBSTITUTED RAW MATERIALS								
<b>Process Code</b> P03	CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)								
Intended Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1991	18600	1,000	900	900		1997 1,090 1998 1,031		1998 / 1997 = 0.82	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W42

SUBSTITUTED RAW MATERIALS

Employed Activity  
W42

SUBSTITUTED RAW MATERIALS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Scott County, City of SHAKOPEE -- RAHR MALTING CO. -- ERCID -- 700850010**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Chlorine</i>	1992	1338	1,131	1,364	1,338	1,338	1997 25,200 1998 29,700		1998 / 1997 = 0.98	No

**Process Code** P29 STERILIZING (FUMIGATING, DISINFECTING, ETC.)

Intended Activity  
W42  
W61  
W72

SUBSTITUTED RAW MATERIALS

CHANGED TO AQUEOUS CLEANERS (FROM SOLVENTS OR OTHER MATERIALS)

MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:**  
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  
F10 CUSTOMERS INCREASED DEMANDS ON SANITATION

**Sherburne County, City of BECKER -- LIBERTY PAPER INC -- ERCID -- 710090014**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1997	57000					1997 57,000 1998 45,103	1998 / 1997 = 1.11	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Employed Activity  
W71

EMPLOYEES TRAINED ON A REGULAR BASIS TO IMPROVE HOUSEKEEPING AND REDUCE RELEASES. USE OF BEST MANAGEMENT PRACTICES. EXPLORING ALTERNATIVE MIXTURES.

**Process Code** P22 PAPER MANUFACTURING

Employed Activity  
W71

EMPLOYEES TRAINED ON A REGULAR BASIS TO IMPROVE HOUSEKEEPING AND REDUCE RELEASES. USE OF BEST MANAGEMENT PRACTICES. EXPLORING ALTERNATIVE MIXTURES.

**Non Numeric Objective:** BEST MANAGEMENT PRACTICES BEING USED AND CONTINUALLY LOOKING TO REDUCE THE AMOUNT OF FELT WASH NECESSARY. EXPLORING ALTERNATIVE MIXTURES WHICH WOULD LIMIT THE QUANTITY OF THE LISTED CHEMICAL USED.

**Non Numeric Progress:** PREPARING A FORMAL POLLUTION PREVENTION PLAN. EMPLOYEES ARE TRAINED ON A REGULAR BASIS TO IMPROVE HOUSEKEEPING, ALONG WITH REDUCING AND PREVENTING RELEASES. EXPLORING ALTERNATIVE MIXTURES WHICH WOULD LIMIT THE QUANTITY OF THE LISTED CHEMICAL USED.

**Sherburne County, City of BECKER -- NSP - SHERCO PLANT -- ERCID -- 710090001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	12000					1997 15,770 1998 30,100	1998 / 1997 = 1.01	No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Intended Activity  
W42

SUBSTITUTED RAW MATERIALS

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Intended Activity  
W52

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

Employed Activity  
W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**Sherburne County, City of PRINCETON -- CRYSTAL CABINET WORKS, INC. -- ERCID -- 710050001**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1996	22235					1997 20,010 1998 14,512	1998 / 1997 = 0.92	Yes

- Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)
- Intended Activity
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
  - W73 SUBSTITUTED COATING MATERIALS USED
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
- Employed Activity
- W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W73 SUBSTITUTED COATING MATERIALS USED
  - W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1996	14380					1998 12,337	1998 / 1997 = 0.92	No

- Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)
- Intended Activity
- W73 SUBSTITUTED COATING MATERIALS USED
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS
  - W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
- Employed Activity
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
  - W73 SUBSTITUTED COATING MATERIALS USED
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

- Barriers to P2:**
- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
  - F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE
  - F10 OUR FINISHES ARE BECOMING MORE "CUSTOM", WHICH REQUIRES ADDITIONAL FINISHING STEPS AND COLOR CHANGES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1996	14322					1997 19,304 1998 15,422	1998 / 1997 = 0.92	Yes

- Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)
- Intended Activity
- W73 SUBSTITUTED COATING MATERIALS USED
  - W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1996	84451					1997 38,476 1998 23,985	1998 / 1997 = 0.92	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1996	17616					1998 13,635	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W73 SUBSTITUTED COATING MATERIALS USED  
Employed Activity  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 OUR FINISHES ARE BECOMING MORE "CUSTOM", WHICH REQUIRES ADDITIONAL FINISHING STEPS AND COLOR CHANGES.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1996	13474					1997 11,041 1998 16,554	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 OUR FINISHES ARE BECOMING MORE "CUSTOM", WHICH REQUIRES ADDITIONAL FINISHING STEPS AND COLOR CHANGES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1996	80812					1997 68,036 1998 84,701	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
 Intended Activity  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W73 SUBSTITUTED COATING MATERIALS USED  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 Employed Activity  
 W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
 W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
 W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
 F10 OUR FINISHES ARE BECOMING MORE "CUSTOM", WHICH REQUIRES ADDITIONAL FINISHING STEPS AND COLOR CHANGES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	140553					1997 126,089 1998 497,289	1998 / 1997 = 0.92	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
Employed Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W73 SUBSTITUTED COATING MATERIALS USED  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE  
F10 OUR FINISHES ARE BECOMING MORE "CUSTOM", WHICH REQUIRES ADDITIONAL FINISHING STEPS AND COLOR CHANGES.

**Sibley County, City of GAYLORD -- M. G. WALDBAUM CO. -- ERCID -- 720400012**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1998	21023					1997 14,400	1998 / 1997 = 1.46	No
							1998 21,023		

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
Employed Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** VENDOR ASSISTANCE AND PARTICIPATIVE TEAM MANAGEMENT.

**Non Numeric Progress:** VENDOR ASSISTANCE AND PARTICIPATIVE TEAM MANAGEMENT.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1998	29202					1997 23,100	1998 / 1997 = 1.26	No
							1998 29,202		

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT  
Employed Activity  
W59 MODIFIED STRIPPING / CLEANING EQUIPMENT

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Non Numeric Objective:** VENDOR ASSISTANCE AND PARTICIPATIVE TEAM MANAGEMENT.

**Non Numeric Progress:** VENDOR ASSISTANCE AND PARTICIPATIVE TEAM MANAGEMENT.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**St Louis County, City of BIWABIK -- MINNESOTA EXPLOSIVES CO. -- ERCID -- 690580002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1996	180					1997 380	1998 / 1997 = 1.25	No
							1998 360		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1996	600					1997 1,240	1998 / 1997 = 1.32	No
							1998 1,300		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**St Louis County, City of CHISHOLM -- MINNESOTA TWIST DRILL, INC. -- ERCID -- 690950008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium Compounds</i>	1995	15737	18,853	28,287	37,000	37,000	1997 18,853	1998 / 1997 = 1.16	No
							1998 28,287		

**Process Code** P15 HEAT TREATING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W19 MAINTENANCE PROCEDURES FOR THE HEAT TREATING CLAMP SYSTEM AS INTRODUCED IN 1996 IS BEING MAINTAINED.

**Barriers to P2:** F10 PURCHASED A SECOND HEAT TREAT SYSTEM TO MEET AN EXPECTED INCREASE IN PRODUCTION FOR 1999.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Chromium</i>	1994	13889	20,561	24,844	41,600	41,600	1997 20,561 1998 24,844	1998 / 1997 = 1.16	No	

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W58 SOURCE REDUCTION METHODS ARE LIMITED BECAUSE OF INDUSTRY STANDARD REQUIREMENTS ON THE SIZE AND GEOMETRY OF THE DRILL.  
Employed Activity  
W58 SOURCE REDUCTION METHODS ARE LIMITED BECAUSE OF INDUSTRY STANDARD REQUIREMENTS ON THE SIZE AND GEOMETRY OF THE DRILL.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**St Louis County, City of DULUTH -- A.E. STALEY MANUFACTURING COMPANY -- ERCID -- 691250003**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Maleic Anhydride</i>	1992	35					1997 3,066 1998 3,488	1998 / 1997 = 1.09	Yes	

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W19 THE CHANGE INTENDED FOR USE WAS TO CUT DOWN ON THE RATE OF ADDITION OF MALEIC ANHYDRIDE DURING BATCH MAKE-UP TO REDUCE GENERATION OF EMISSIONS.  
Employed Activity  
W19 THE CHANGE INTENDED FOR USE WAS TO CUT DOWN ON THE RATE OF ADDITION OF MALEIC ANHYDRIDE DURING BATCH MAKE-UP TO REDUCE GENERATION OF EMISSIONS.

**Process Code** P03  
Intended Activity  
W58 THE INTENTION WAS TO REDUCE THE AMOUNT OF SAMPLING EVENTS AND SO REDUCE EMISSIONS.  
W58 THE INTENTION WAS TO REDUCE THE AMOUNT OF SAMPLING EVENTS AND SO REDUCE EMISSIONS.  
Employed Activity  
W58 THE INTENTION WAS TO REDUCE THE AMOUNT OF SAMPLING EVENTS AND SO REDUCE EMISSIONS.  
W58 THE INTENTION WAS TO REDUCE THE AMOUNT OF SAMPLING EVENTS AND SO REDUCE EMISSIONS.

**Non Numeric Objective:** MAINTAIN EFFORT TO RECEIVE IT IN JUMBO RAIL CARS AS MUCH AS POSSIBLE. OF THE AMOUNT THAT IS RELEASED, A LARGE PERCENTAGE OCCURS DURING SAMPLING. BY REDUCING THE NUMBER OF SAMPLING EVENTS, WE SHOULD REDUCE THE AMOUNT OF VAPORS RELEASED.

**Non Numeric Progress:** DURING BATCH MAKE-UP, THE RATE OF ADDITION WAS REDUCED WHICH REDUCED THE AMOUNT OF VAPORS RELEASED TO THE ATMOSPHERE FROM THE PRESSURE EQUALIZATION TUBE ON THE VESSEL.

**St Louis County, City of DULUTH -- LAKE SUPERIOR PAPER IND. -- ERCID -- 691250008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1995	59000					1997 125,000 1998 133,000	1998 / 1997 = 0.98	No

**Process Code** P22 PAPER MANUFACTURING

Intended Activity

W58

POTENTIAL SOURCE REDUCTION ACTIVITIES TO BE IDENTIFIED FROM FEASIBILITY STUDY.

Employed Activity

W58

ADDITIONAL SOURCES OF METHANOL RELEASES WERE IDENTIFIED AND FEASIBILITY STUDY INITIATED.

**Non Numeric Objective:** METHANOL GENERATED AS AN IMPURITY OF THE PULPING PROCESS. PLAN TO EVALUATE WHETHER THERE ARE ANY TECHNICALLY FEASIBLE AND COST-EFFECTIVE METHODS FOR REDUCING METHANOL EMISSIONS.

**Non Numeric Progress:** FEASIBILITY STUDY INITIATED IN 1997. PRELIMINARY REVIEW DID NOT IDENTIFY ANY FEASIBLE SOURCE REDUCTION ACTIVITIES. CONTINUE TO SEARCH FOR ADDITIONAL RESOURCE REDUCTION OPTIONS AND GIVE SUITABLE METHODS APPROPRIATE CONSIDERATION.

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

**St Louis County, City of DULUTH -- M.E. INTERNATIONAL - DULUTH -- ERCID -- 691250013**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Barium</i>	1991	12268					1998 15,200	1998 / 1997 = 0.95	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W42

SUBSTITUTED RAW MATERIALS

Employed Activity

W42

SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** KEEP CURRENT WITH MATERIAL SUBSTITUTIONS WHICH WILL REDUCE OR ELIMINATE USE OF BARIUM.

**Non Numeric Progress:** BARIUM FREE MATERIALS MEETING OUR MANUFACTURING REQUIREMENTS CURRENTLY ARE NOT AVAILABLE. SUPPLIER INQUIRIES CONTINUING.

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Molybdenum Trioxide</i>	1993	17					1997 3,423 1998 8,430	1998 / 1997 = 1.63	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W42 SUBSTITUTED RAW MATERIALS

Employed Activity

W42 SUBSTITUTED RAW MATERIALS

**Non Numeric Objective:** CONTINUE TO SEEK ALTERNATIVES WHILE MAINTAINING EFFECTIVE RECYCLING PROGRAM. CHEMICAL IS A REQUIRED ALLOYING ELEMENT FOR STEEL PRODUCTION AND CURRENTLY THERE IS NO KNOWN SUBSTITUTE.

**Non Numeric Progress:** METAL RECYCLING PROGRAM CONTINUES. SUPPLIER INQUIRIES CONTINUE.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

**St Louis County, City of HIBBING -- INTERMET NORTHERN FOUNDRY -- ERCID -- 692350004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1998	1204	1,204	1,305	1,300	1,300	1997 1,204 1998 1,305	1998 / 1997 = 1.52	No

**Process Code** P01 CASTING ANY MATERIAL

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F10 INCREASED PRODUCTION/USE OF THIS CHEMICAL.

**St Louis County, City of HIBBING -- L & M RADIATOR, INC. -- ERCID -- 692350038**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1993	55480	47,000	67,000	67,000	67,000	1997 58,780 1998 66,946	1998 / 1997 = 0.96	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:**

**St Louis County, City of HIBBING -- NOBLE INDUSTRIES, LTD. -- ERCID -- 692350002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>							1997 23,150	1998 / 1997 = 0.99	Yes
							1998 17,350		

**Process Code** P04 CHEMICAL MILLING (ETCHING)  
 Intended Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 Employed Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
 Intended Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 Employed Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS

**Process Code** P10 ELECTROPLATING  
 Intended Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS  
 Employed Activity  
 W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** ATTEMPTS TO MAXIMIZE COPPER USED WHILE MINIMIZING SCRAP CREATED. OPTIMIZED SIZE OF PANELS TO CREATE THIS RESULT AND RECYCLES FOR REUSE A VERY HIGH PERCENTAGE OF THE CHEMICAL.

**Non Numeric Progress:** FOLLOWED MAINTENANCE PROCEDURES ON PROCESS EQUIPMENT, IMPROVED HANDLING OF RAW MATERIAL, AND ACQUIRED EQUIPMENT TO IMPROVE REUSE OF THIS CHEMICAL.

**St Louis County, City of VIRGINIA -- GEORGIA-PACIFIC RESINS, INC. -- ERCID -- 694400002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>4,4'-isopropylidenediphenol</i>	1994	20					1997 20	1998 / 1997 = 0.71	Yes
							1998 0		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 Employed Activity  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REVIEWING AND EVALUATING METHODS FOR QUANTIFYING LOSSES.

**Non Numeric Progress:** COMPLETED EVALUATION OF THE PROCESS EQUIPMENT AND REFINED THE METHODOLOGIES USED IN DETERMINING LOSS(S).

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1994	100					1997 959 1998 901	1998 / 1997 = 0.71	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** REVIEWING AND EVALUATING METHODS FOR QUANTIFYING LOSSES.

**Non Numeric Progress:** COMPLETED EVALUATION OF THE PROCESS EQUIPMENT AND REFINED THE METHODOLOGIES USED IN DETERMINING LOSS(S).

**Barriers to P2:**

F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1994	50					1997 1,658 1998 1,470	1998 / 1997 = 0.71	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Non Numeric Objective:** REVIEWING AND EVALUATING METHODS FOR QUANTIFYING LOSSES.

**Non Numeric Progress:** COMPLETED EVALUATION OF THE PROCESS EQUIPMENT AND REFINED THE METHODOLOGIES USED IN DETERMINING LOSS(S).

**Barriers to P2:**

F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE

F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1994	100					1997 596 1998 373	1998 / 1997 = 0.71	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** REVIEWING AND EVALUATING METHODS FOR QUANTIFYING LOSSES.

**Non Numeric Progress:** COMPLETED EVALUATION OF THE PROCESS EQUIPMENT AND REFINED THE METHODOLOGIES USED IN DETERMINING LOSS(S).

**Stearns County, City of ALBANY -- KRAFT FOODS -- ERCID -- 730040001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1994	34	14	19	0	0	1997 34,108	1998 / 1997 = 0.93	No
							1998 28,886		

**Process Code** P14 FOOD PROCESSING (HUMAN AND ANIMAL)

Intended Activity  
W71 CONTINUE EFFORTS TO IMPROVE CHEMICAL USE EFFICIENCY DURING NEUTRALIZATION PROCESS.

Employed Activity  
W71 CONTINUE EFFORTS TO IMPROVE CHEMICAL USE EFFICIENCY DURING NEUTRALIZATION PROCESS.

**Barriers to P2:**

F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
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

**Stearns County, City of HOLDINGFORD -- POLAR TANK TRAILER, INC. -- ERCID -- 731050001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1996						1997 136,041	1998 / 1997 = 0.95	Yes
							1998 141,037		

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** WILL CONTINUE TO RECYCLE ALL SCRAP METAL WE PRODUCE, WHICH IS OUR ONLY RECOURSE AT THIS TIME. IT IS NOT TECHNICALLY OR ECONOMICALLY FEASIBLE TO IMPLEMENT SOURCE REDUCTION TECHNIQUES FOR CHROMIUM.

**Non Numeric Progress:** WILL CONTINUE TO RECYCLE ALL SCRAP METAL WE PRODUCE, WHICH IS OUR ONLY RECOURSE AT THIS TIME. IT IS NOT TECHNICALLY OR ECONOMICALLY FEASIBLE TO IMPLEMENT SOURCE REDUCTION TECHNIQUES FOR CHROMIUM.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1996						1997 29,043 1998 26,044	1998 / 1997 = 0.95	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** WILL CONTINUE TO RECYCLE ALL SCRAP METAL WE PRODUCE, WHICH IS OUR ONLY RECOURSE AT THIS TIME. IT IS NOT TECHNICALLY OR ECONOMICALLY FEASIBLE TO IMPLEMENT SOURCE REDUCTION TECHNIQUES FOR MANGANESE.

**Non Numeric Progress:** WILL CONTINUE TO RECYCLE ALL SCRAP METAL WE PRODUCE, WHICH IS OUR ONLY RECOURSE AT THIS TIME. IT IS NOT TECHNICALLY OR ECONOMICALLY FEASIBLE TO IMPLEMENT SOURCE REDUCTION TECHNIQUES FOR MANGANESE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1996						1997 63,023 1998 66,021	1998 / 1997 = 0.95	Yes

**Process Code** P20 MOLDING ANY MATERIAL (BENDING, FORMING, SHAPING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES



**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Employed Activity  
W29

CONTINUE TO MAXIMIZE THE USE OF A STORAGE VESSEL WHICH REDUCES FREQUENCY IN WHICH THE VESSEL MUST BE FILLED AND SUBSEQUENTLY REDUCE EMISSIONS.

**Non Numeric Objective:** EMISSIONS HAVE BEEN MINIMIZED THROUGH IMPROVED GASOLINE AND ALCOHOL HANDLING SYSTEMS. THE LOADING SYSTEM UTILIZES BOTTOM LOADING TECHNIQUES TO ELIMINATE SPLASHING AND MINIMIZE FUGITIVE EMISSIONS.

**Non Numeric Progress:** PROCESS ENHANCEMENTS CURRENTLY UNDER EVALUATION TO ESTABLISH PRODUCT THAT PRECLUDES DENATURING. THIS WOULD ELIMINATE USE OF GASOLINE AND CONSTITUENTS THAT REQUIRE INCLUSION IN THIS REPORT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1996	552754							No

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Employed Activity  
W52  
W89

MODIFIED EQUIPMENT, LAYOUT, OR PIPING

CONTINUE TO EVALUATE CLEANING PROCESS AND MODIFY EQUIPMENT LAYOUT, PROCESS PIPING AND STORAGE VESSELS TO REDUCE AND OPTIMIZE USE OF NITRIC ACID.

**Non Numeric Objective:** CURRENTLY AN ALTERNATIVE CHEMICAL IS UNDER EVALUATION AS A REPLACEMENT FOR NITRIC ACID WHICH MAY SIGNIFICANTLY REDUCE EMISSIONS OF NITRATE COMPOUNDS.

**Non Numeric Progress:** EVALUATION OF A REPLACEMENT FOR NITRIC ACID AS A CLEANING CHEMICAL CONTINUES.

**Barriers to P2:**  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F06 SPECIFIC REGULATORY / PERMIT BURDENS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	62					1997 52		Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Employed Activity  
W29

CONTINUE TO MAXIMIZE THE USE OF A STORAGE VESSEL WHICH REDUCES FREQUENCY IN WHICH THE VESSEL MUST BE FILLED AND SUBSEQUENTLY REDUCE EMISSIONS.

**Non Numeric Objective:** EMISSIONS HAVE BEEN MINIMIZED THROUGH IMPROVED GASOLINE AND ALCOHOL HANDLING SYSTEMS. THE LOADING SYSTEM UTILIZES BOTTOM LOADING TECHNIQUES TO ELIMINATE SPLASHING AND MINIMIZE FUGITIVE EMISSIONS.

**Non Numeric Progress:** PROCESS ENHANCEMENTS CURRENTLY UNDER EVALUATION TO ESTABLISH PRODUCT THAT PRECLUDES DENATURING. THIS WOULD ELIMINATE USE OF GASOLINE AND CONSTITUENTS THAT REQUIRE INCLUSION IN THIS REPORT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	56					1997 47		Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Employed Activity  
W29

CONTINUE TO MAXIMIZE THE USE OF A STORAGE VESSEL WHICH REDUCES FREQUENCY IN WHICH THE VESSEL MUST BE FILLED AND SUBSEQUENTLY REDUCE EMISSIONS.

**Non Numeric Objective:** EMISSIONS HAVE BEEN MINIMIZED THROUGH IMPROVED GASOLINE AND ALCOHOL HANDLING SYSTEMS. THE LOADING SYSTEM UTILIZES BOTTOM LOADING TECHNIQUES TO ELIMINATE SPLASHING AND MINIMIZE FUGITIVE EMISSIONS.

**Non Numeric Progress:** PROCESS ENHANCEMENTS CURRENTLY UNDER EVALUATION TO ESTABLISH PRODUCT THAT PRECLUDES DENATURING. THIS WOULD ELIMINATE USE OF GASOLINE AND CONSTITUENTS THAT REQUIRE INCLUSION IN THIS REPORT.

**Stearns County, City of PAYNESVILLE -- CROMWELL MOLDING -- ERCID -- 731840025**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
Styrene	1994	18079	9,321	9,856	9,856	9,856	1997	9,321	1998 / 1997 = 0.78	No
							1998	9,856		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W78 CONTINUE EMPLOYEE TRAINING IN APPLICATION PROCESSES.  
 Employed Activity  
 W78 CONTINUE EMPLOYEE TRAINING IN APPLICATION PROCESSES.  
 W42 SUBSTITUTED RAW MATERIALS

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

**Stearns County, City of SARTELL -- DEZURIK -- ERCID -- 732620002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
Phenol	1996	7190					1997	8,970	1998 / 1997 = 1.05	Yes
							1998	10,280		

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W53 USE OF A DIFFERENT PROCESS CATALYST  
 Employed Activity  
 W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Non Numeric Objective:** EVALUATE RESINS WITH A LOWER PHENOL CONTENT THAT COULD REPLACE THE PRESENT SAND MOLDING RESIN. OTHER CONSIDERATIONS BESIDES PHENOL CONTENT WILL BE EVALUATED. MINIMIZE USAGE RATE OF SAND MOLDING RESIN.

**Non Numeric Progress:** EVALUATION OF RESINS TO REPLACE THE PRESENT SAND MOLDING RESIN. A RESIN WITH A SLIGHTLY LOWER PHENOL CONTENT WAS SELECTED AND USE BEGAN IN 1999.

**Stearns County, City of ST. CLOUD -- DCI, INC. -- ERCID -- 732300056**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1991	65515					1997 82,024 1998 75,420	1998 / 1997 = 0.91	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W82 MODIFIED DESIGN OR COMPOSITION

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON-SITE.

Employed Activity

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON-SITE.

W82 MODIFIED DESIGN OR COMPOSITION

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

**Non Numeric Objective:** TO REDUCE OR ELIMINATE WOULD REQUIRE THE USE OF ANOTHER MATERIAL WHICH IS NOT FEASIBLE. WILL CONTINUE TO RECYCLE STAINLESS STEEL AND WORK WITH EMPLOYEES TO REDUCE SCRAP AND WASTE.

**Non Numeric Progress:** CUSTOM FABRICATION CREATES VARIABLE PRODUCT MIX, THIS IS NOT AN IMPLEMENTED TECHNIQUE, AND IS CONTROLLED ONLY BY INDUSTRY DEMAND.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1991	6510					1997 8,343 1998 7,774	1998 / 1997 = 0.91	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

W82 MODIFIED DESIGN OR COMPOSITION

W29 BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

**Non Numeric Objective:** TO REDUCE OR ELIMINATE WOULD REQUIRE THE USE OF ANOTHER MATERIAL WHICH IS NOT FEASIBLE. WILL CONTINUE TO RECYCLE STAINLESS STEEL AND WORK WITH EMPLOYEES TO REDUCE SCRAP AND WASTE.

**Non Numeric Progress:** CUSTOM FABRICATION CREATES VARIABLE PRODUCT MIX, THIS IS NOT AN IMPLEMENTED TECHNIQUE, AND IS CONTROLLED ONLY BY INDUSTRY DEMAND.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1991	14515					1997 38,635 1998 36,870	1998 / 1997 = 0.91	No

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W82

MODIFIED DESIGN OR COMPOSITION

W29

BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

Employed Activity

W82

MODIFIED DESIGN OR COMPOSITION

W29

BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W29

BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

W82

MODIFIED DESIGN OR COMPOSITION

Employed Activity

W29

BETTER INVENTORY CONTROL - LESS OF CHEMICAL ON SITE

W82

MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:** TO REDUCE OR ELIMINATE WOULD REQUIRE THE USE OF ANOTHER MATERIAL WHICH IS NOT FEASIBLE. WILL CONTINUE TO RECYCLE STAINLESS STEEL AND WORK WITH EMPLOYEES TO REDUCE SCRAP AND WASTE.

**Non Numeric Progress:** CUSTOM FABRICATION CREATES VARIABLE PRODUCT MIX, THIS IS NOT AN IMPLEMENTED TECHNIQUE, AND IS CONTROLLED ONLY BY INDUSTRY DEMAND.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1991	5600					1997 11,701 1998 24,001	1998 / 1997 = 0.91	No

**Process Code** P10 ELECTROPLATING

Intended Activity

W78

SURFACE PREPARATION - BETTER MECHANICAL POLISHING BEFORE ELECTROPOLISHING PROCESS.

Employed Activity

W78

SURFACE PREPARATION - BETTER MECHANICAL POLISHING BEFORE ELECTROPOLISHING PROCESS.

**Non Numeric Objective:** THERE ARE NO OTHER KNOWN SUBSTITUTE CHEMICALS FOR ELECTROPOLISHING OF STAINLESS STEEL. ALL ACID IS REUSED MANY TIMES BEFORE IT IS SHIPPED FOR OFF-SITE NEUTRALIZING. WILL CONTINUE TO PURSUE ALTERNATIVES.

**Non Numeric Progress:** NA

**Barriers to P2:** F10 TREATED DOUBLE THE QUANTITY IN 1998 VERSUS 1997 DUE TO A ONE-TIME CONTAMINATION PROBLEM WHICH CAME TO THE PLANT WITH A HIGH IRON CONTENT THAT CAUSED THE ACID LIFE TO BE SHORTER THAN NORMAL.

**Stearns County, City of ST. CLOUD -- FRIGIDAIRE HOME PRODUCTS-FREEZERS -- ERCID -- 732300008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,1-dichloro-1-fluoroethane</i>	1994	4800					1997 54,709	1998 / 1997 = 1.23	No
							1998 415,000		

**Process Code** P13 FOAM BLOWING  
Intended Activity  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W90 NOT APPLICABLE

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION  
F10 TECHNICAL SUPPORT FROM OUR NEW SUPPLIER HAS PROVIDED A BETTER UNDERSTANDING OF THE PROCESS AND THE AMOUNT OF EMISSIONS FROM THE PROCESS WHICH ENABLES US TO MORE ACCURATELY QUANTIFY EMISSIONS.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1991	17000					1997 17,021	1998 / 1997 = 1.23	No
							1998 32,000		

**Process Code** P13 FOAM BLOWING  
Intended Activity  
W41 INCREASED PURITY OF RAW MATERIALS  
Employed Activity  
W90 NOT APPLICABLE

**Barriers to P2:**  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 IMPROVED QUALITY OF OUR REPORTING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1991	900					1997 4,950	1998 / 1997 = 1.23	Yes
							1998 3,535		

**Process Code** P19 METAL TREATING (ANODIZING, PHOSPHATING, PICKLING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Stearns County, City of ST. CLOUD -- VISION EASE LENS, INC. -- ERCID -- 732300020**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead</i>	1990	208	114	92	55	55	1997 72,219 1998 46,730	1998 / 1997 = 0.71	Yes

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)  
 Intended Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
 Employed Activity  
 W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Trichloroethylene</i>	1990	25031	12,174	13,500	5,000	0	1997 48,272 1998 29,444	1998 / 1997 = 0.71	No

**Process Code** P17 LENS GRINDING  
 Intended Activity  
 W71 STARTED TESTING SUBSTITUTE CLEANER FOR TCE IN 6/98.  
 W58 MECHANICAL BUTTON BLOCKING SYSTEM STARTED TOTALLY IN 12/98 TO REPLACE TRICHLOROETHYLENE DEGREASER.  
 Employed Activity  
 W58 MECHANICAL BUTTON BLOCKING NOW USED IN PLACE OF WAX BLOCKING. TCE NO LONGER NEEDED TO CLEAN WAX FROM GLASS BUTTON PARTS.

**Barriers to P2:** F10 MECHANICAL BLOCKING PROCESS DEVELOPED SLOWER THAN ANTICIPATED. SUBSTITUTE CLEANER WAS NOT FOUND UNTIL 6/98.

**Steele County, City of BLOOMING PRAIRIE -- ELF ATOCHEM NORTH AMERICA INC. -- ERCID -- 740140002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formic Acid</i>	1993	1270	630	3,194	2,100	2,000	1997 630 1998 3,193	1998 / 1997 = 1.88	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W42 SUBSTITUTED RAW MATERIALS  
 W58 IMPROVE OPERATION OF THE PRODUCTION PROCESS TO REDUCE THE NUMBER OF BATCHES THAT USE FORMIC ACID AS RAW MATERIAL.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W58

**Barriers to P2:** F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS  
F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Peracetic Acid</i>	1993	438	1,348	3,688	2,400	1,925	1997 1,767 1998 3,688	1998 / 1997 = 1.25	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W53 USE OF A DIFFERENT PROCESS CATALYST

W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Employed Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** 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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phosphoric Acid</i>	1993	6771		6,771	4,100	4,100	1998 6,771	1998 / 1997 = 1.37	No

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)

Intended Activity

W19 CHANGES IN OPERATING PRACTICES TO REDUCE AMOUNT OF PHOSPHORIC ACID FEED.

W19 CHANGES IN OPERATING PRACTICES TO REDUCE AMOUNT OF PHOSPHORIC ACID FEED

**Barriers to P2:**

**Steele County, City of BLOOMING PRAIRIE -- TANDEM PRODUCTS, INC. -- ERCID -- 740140039**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1996	2447	2,515	1,038	1,038	1,038	1997 2,738 1998 1,038	1998 / 1997 = 0.88	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W29 CONTINUE EMPLOYEE TRAINING IN MATERIAL HANDLING AND PROPER JOB MANAGEMENT.

W49 CONTINUE RESEARCHING POSSIBLE SUBSTITUTIONS FOR RAW MATERIALS BY WORKING WITH DISTRIBUTORS.  
Employed Activity  
W49 CONTINUE RESEARCHING POSSIBLE SUBSTITUTIONS FOR RAW MATERIALS BY WORKING WITH DISTRIBUTORS.  
W29 CONTINUE EMPLOYEE TRAINING IN MATERIAL HANDLING AND PROPER JOB MANAGEMENT.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1995	14801	9,473	164	164	164			Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W29 CONTINUE EMPLOYEE TRAINING IN MATERIAL HANDLING AND PROPER JOB MANAGEMENT.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W49 CONTINUE RESEARCHING POSSIBLE SUBSTITUTIONS FOR RAW MATERIALS BY WORKING WITH DISTRIBUTORS.

Employed Activity

W49 CONTINUE RESEARCHING POSSIBLE SUBSTITUTIONS FOR RAW MATERIALS BY WORKING WITH DISTRIBUTORS.  
W29 CONTINUE EMPLOYEE TRAINING IN MATERIAL HANDLING AND PROPER JOB MANAGEMENT.  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Steele County, City of OWATONNA -- BLOUNT, INC. -- ERCID -- 740700124**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium</i>	1996	75000					1997 84,348 1998 69,423	1998 / 1997 = 0.92	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)

Intended Activity

W19 STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.

Employed Activity

W19 STRIVED TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.

**Non Numeric Objective:** MINIMIZE QUANTITY OF STEEL SCRAP GENERATED BY MAXIMIZING THE PERCENT STEEL UTILIZED FROM EACH SHEET AND REDUCE PARTS OR COMPONENTS REJECTED DUE TO DEFECTIVE MACHINING.

**Non Numeric Progress:** RELEASES WERE REDUCED BY 10% DURING 1998.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1996	21000					1997 28,315 1998 24,248	1998 / 1997 = 0.92	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity W19 STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE QUANTITY OF STEEL SCRAP GENERATED. THIS IS ACHIEVED THROUGH PATTERN LAYOUT AND REDUCTION OF REJECTED OR DEFECTIVE PARTS.  
 Employed Activity W19 STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE QUANTITY OF STEEL SCRAP GENERATED. THIS IS ACHIEVED THROUGH PATTERN LAYOUT AND REDUCTION OF REJECTED OR DEFECTIVE PARTS.  
**Non Numeric Objective:** MINIMIZE QUANTITY OF STEEL SCRAP GENERATED BY MAXIMIZING THE PERCENT STEEL UTILIZED FROM EACH SHEET AND REDUCE PARTS OR COMPONENTS REJECTED DUE TO DEFECTIVE MACHINING.  
**Non Numeric Progress:** SUCCESSFULLY REDUCED COPPER RELEASES BY 7% IN 1998. ESTIMATED THAT COPPER RELEASES FOR 1998 WERE LESS THAN EXPECTED AND WERE SUCCESSFUL IN MAXIMIZING STEEL USAGE AND MINIMIZING STEEL SCRAP.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1996	20000					1997 54,520 1998 39,919	1998 / 1997 = 0.92	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity W19 CONSTANTLY STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.  
 Employed Activity W19 CONSTANTLY STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.  
**Non Numeric Objective:** MINIMIZE QUANTITY OF STEEL SCRAP GENERATED BY MAXIMIZING THE PERCENT STEEL UTILIZED FROM EACH SHEET AND REDUCE PARTS OR COMPONENTS REJECTED DUE TO DEFECTIVE MACHINING.  
**Non Numeric Progress:** MANGANESE RELEASES WERE REDUCED BY 20% DURING 1998.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel</i>	1996	81000					1997 69,754 1998 64,195	1998 / 1997 = 0.92	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
 Intended Activity W19 CONSTANTLY STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.  
 Employed Activity W19 STRIVE TO MAXIMIZE STEEL USAGE AND MINIMIZE THE QUANTITY OF STEEL SCRAP GENERATED.

**Non Numeric Objective:** MINIMIZE QUANTITY OF STEEL SCRAP GENERATED BY MAXIMIZING THE PERCENT STEEL UTILIZED FROM EACH SHEET AND REDUCE PARTS OR COMPONENTS REJECTED DUE TO DEFECTIVE MACHINING.

**Non Numeric Progress:** OUR RELEASES FOR 1998 WERE THE SAME AS 1997.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1996	33000					1997 19,830		Yes
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity									
W52	MODIFIED EQUIPMENT, LAYOUT, OR PIPING								
W42	SUBSTITUTED RAW MATERIALS								
W71	INTENDED TO CONTINUE LOOKING INTO FEASIBILITY OF INSTALLING A SOLVENT STILL TO REDUCE XYLENE WASTE.								
Employed Activity									
W42	SUBSTITUTED RAW MATERIALS								
W71	HAVE NOT RULED OUT THE POSSIBILITY OF INSTALLING A SOLVENT STILL TO REDUCE WASTE SOLVENT RELEASES AND PLAN TO CONTINUE LOOKING INTO ITS FEASIBILITY.								
W52	MODIFIED EQUIPMENT, LAYOUT, OR PIPING								

**Non Numeric Objective:** REDUCE THE QUANTITY EMITTED TO AIR AND GENERATED AS WASTE. RESEARCHING WAYS TO ACCOMPLISH THIS INCLUDING SUBSTITUTION OF MATERIAL, RECYCLING, REUSE OF WASTE AND OTHER OPTIONS.

**Non Numeric Progress:** SUCCESSFULLY REDUCED THE QUANTITY OF XYLENE "OTHERWISE USED" BELOW THE REPORTING THRESHOLD BY REPLACING SPRAY APPLICATION GUNS AND SUBSTITUTING MATERIALS. ACTUAL XYLENE RELEASES WERE REDUCED 93%.

**Steele County, City of OWATONNA -- CROWN CORK & SEAL CO., INC. -- ERCID -- 740700127**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1995	110000	135,000	135,000	135,000	135,000	1997 135,000 1998 135,000	1998 / 1997 = 1.05	Yes
<b>Process Code</b> P21	ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)								
Intended Activity									
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								
Employed Activity									
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								
W72	MODIFIED SPRAY SYSTEMS OR EQUIPMENT								

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1995	170000	185,000	220,000	200,000	200,000	1997 185,000 1998 220,000	1998 / 1997 = 1.05	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

Employed Activity

- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT
- W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Steele County, City of OWATONNA -- JOSTENS INC. - SOUTHTOWN -- ERCID -- 74070007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1994	40	41	41	41	41	1997 51,741 1998 41,580	1998 / 1997 = 0.81	No

**Process Code** P25 REFINING

Intended Activity

- W33 INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

- W33 INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**

- 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
- F10 BATCH SYSTEM CAN BE VARIABLE DEPENDING ON THE SIZE OF THE BATCH AND PRODUCTION SCHEDULES/DEMANDS.

**Steele County, City of OWATONNA -- MUSTANG MFG. CO. -- ERCID -- 740700057**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1995	32000					1997 57,000 1998 28,000	1998 / 1997 = 0.7	Yes

**Process Code** P05 CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W71  
Employed Activity  
W71

**Non Numeric Objective:** WORK TO FIND A SUITABLE ALTERNATIVE.

**Non Numeric Progress:** TRIED TO USE A STRAIGHT ACETONE CLEANER WITH DISCOURAGING RESULTS. HAD TO GO BACK TO USING MEK TO GET EQUIPMENT FUNCTIONING PROPERLY. WORKED WITH SOLVENT VENDORS ON A BLEND TO BE USED IN 1999.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1992	21780					1997 13,500 1998 10,340	1998 / 1997 = 0.7	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
Employed Activity  
W81 CHANGED PRODUCT SPECIFICATIONS

**Non Numeric Objective:** ENCOURAGE CUSTOMER SELECTION OF LOW VOC COATINGS WHERE SPECIAL PAINTS ARE REQUIRED. IMPROVEMENTS TO PAINTING PROCESS.

**Non Numeric Progress:** HAD A NUMBER OF COMPANIES DEMONSTRATE THEIR EQUIPMENT FOR BETTER TRANSFER EFFICIENCY AND HAVE MADE A COMMITMENT TO PURCHASE IN 1999.

**Steele County, City of OWATONNA -- TRUTH HARDWARE -- ERCID -- 740700002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1997	12834					1997 12,834 1998 13,603	1998 / 1997 = 0.91	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** 100 % DEPENDENT ON PRODUCTION DEMANDS. DEVELOPMENT OF AN ENVIRONMENTAL MANAGEMENT SYSTEM INCLUDING EMPLOYEE EDUCATION AND TRAINING, SYSTEM/PRODUCT USE EVALUATION (ONGOING) AND OPERATION/CLEAN-UP PROCEDURE EVALUATION.

**Non Numeric Progress:** PROCESS IS 100% DEPENDANT ON PRODUCTION DEMANDS MAKING FUTURE REDUCTIONS LIMITED AT BEST.

**Barriers to P2:**

**Steele County, City of OWATONNA -- TRUTH HARDWARE - PAINT PLANT -- ERCID -- 740700113**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1995	11000					1997 9,502	1998 / 1997 = 0.99	Yes
							1998 9,504		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** ENVIRONMENTAL MANAGEMENT SYSTEM IN PLACE CONTAINING: EMPLOYEE EDUCATION, SPECIFIC PRODUCT USE EVALUATION, PRODUCT USE SUBSTITUTION, SOLVENT COMPONENT COMPOSITION EVALUATION, CLEAN-UP PROCESS EVALUATION, AND EMPHASIS ON POWDER PAINT USAGE.

**Non Numeric Progress:** SIGNIFICANT POLLUTION PREVENTION OPPORTUNITIES ARE DEPENDANT UPON OUTSIDE CUSTOMER DEMANDS FOR SOLVENT BASED PAINT VERSUS POWDER COATING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1995	61900					1997 50,046	1998 / 1997 = 0.99	Yes
							1998 33,646		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** ENVIRONMENTAL MANAGEMENT SYSTEM IN PLACE CONTAINING: EMPLOYEE EDUCATION, SPECIFIC PRODUCT USE EVALUATION, PRODUCT USE SUBSTITUTION, SOLVENT COMPONENT COMPOSITION EVALUATION, CLEAN-UP PROCESS EVALUATION, AND EMPHASIS ON POWDER PAINT USAGE.

**Non Numeric Progress:** SIGNIFICANT POLLUTION PREVENTION OPPORTUNITIES ARE DEPENDANT UPON OUTSIDE CUSTOMER DEMANDS FOR SOLVENT BASED PAINT VERSUS POWDER COATING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1995	10800					1997 17,994	1998 / 1997 = 0.99	Yes
							1998 18,735		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** ENVIRONMENTAL MANAGEMENT SYSTEM IN PLACE CONTAINING: EMPLOYEE EDUCATION, SPECIFIC PRODUCT USE EVALUATION, PRODUCT USE SUBSTITUTION, SOLVENT COMPONENT COMPOSITION EVALUATION, CLEAN-UP PROCESS EVALUATION, AND EMPHASIS ON POWDER PAINT USAGE.

**Non Numeric Progress:** SIGNIFICANT POLLUTION PREVENTION OPPORTUNITIES ARE DEPENDANT UPON OUTSIDE CUSTOMER DEMANDS FOR SOLVENT BASED PAINT VERSUS POWDER COATING.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	10000					1997 23,254	1998 / 1997 = 0.99	Yes
							1998 24,915		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

W14

CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS

**Non Numeric Objective:** ENVIRONMENTAL MANAGEMENT SYSTEM IN PLACE CONTAINING: EMPLOYEE EDUCATION, SPECIFIC PRODUCT USE EVALUATION, PRODUCT USE SUBSTITUTION, SOLVENT COMPONENT COMPOSITION EVALUATION, CLEAN-UP PROCESS EVALUATION, AND EMPHASIS ON POWDER PAINT USAGE.

**Non Numeric Progress:** SIGNIFICANT POLLUTION PREVENTION OPPORTUNITIES ARE DEPENDANT UPON OUTSIDE CUSTOMER DEMANDS FOR SOLVENT BASED PAINT VERSUS POWDER COATING.

**Swift County, City of BENSON -- CASE TYLER -- ERCID -- 760150028**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese</i>	1998	14560					1998 30,651	1998 / 1997 = 1	No

**Process Code** P35 WELDING ANY MATERIAL (SOLDERING, BRAZING, JOINING, ETC.)

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W41

INCREASED PURITY OF RAW MATERIALS

**Non Numeric Objective:** USE DEPENDS ON PRODUCTION.

**Non Numeric Progress:** USE DEPENDS ON PRODUCTION.

**Barriers to P2:** F10 FIRST YEAR THAT THIS CHEMICAL WAS REPORTED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1994	10121	13,397	10,121	10,121	10,121	1997 14,107	1998 / 1997 = 1	Yes
							1998 10,961		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W68

IMPROVED RINSE EQUIPMENT OPERATION

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W81

CHANGED PRODUCT SPECIFICATIONS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1994	11754	15,331	11,754	11,754	11,754	1997 18,969 1998 15,204	1998 / 1997 = 1	Yes

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W68 IMPROVED RINSE EQUIPMENT OPERATION  
W24 INSTITUTED BETTER LABELING PROCEDURES  
W81 CHANGED PRODUCT SPECIFICATIONS  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1994	14560	13,011	14,560	14,560	14,560	1997 16,752 1998 18,460	1998 / 1997 = 1	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W68 IMPROVED RINSE EQUIPMENT OPERATION  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W81 CHANGED PRODUCT SPECIFICATIONS  
W24 INSTITUTED BETTER LABELING PROCEDURES  
Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:** F10 PRODUCTION INCREASES.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyclohexane</i>							1998 139	1998 / 1997 = 1.2	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Employed Activity  
W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Employed Activity  
W32  
W33  
W36

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES  
IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Non Numeric Objective:** ADDED TO OUR FINAL PRODUCT AS A REQUIRED DENATURANT. ONLY RELEASES ARE STANDING AND WORKING EMISSIONS FROM THE TANK (LESS THAN 500 POUNDS PER YEAR. THIS YEAR THERE WAS A SPILL OF PRODUCT THAT INCREASED RELEASES TO GREATER THAN 500 POUNDS PER YEAR.

**Non Numeric Progress:** SPILL OCCURRED DURING UNLOADING PROCEDURES. NEW WRITTEN SOP'S, TRAINING, AND SPCC PLAN. DIKE WAS REBUILT WITH A SUPERVISED OUTLET VALVE. LEVEL ALARMS HAVE BEEN INSTALLED.

**Barriers to P2:**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>							1998 370	1998 / 1997 = 1.2	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Employed Activity  
W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Employed Activity  
W32  
W36  
W33

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
INSTALLED OVERFLOW ALARMS OR AUTOMATIC SHUTOFF VALVES

**Non Numeric Objective:** ADDED TO OUR FINAL PRODUCT AS A REQUIRED DENATURANT. ONLY RELEASES ARE STANDING AND WORKING EMISSIONS FROM THE TANK (LESS THAN 500 POUNDS PER YEAR. THIS YEAR THERE WAS A SPILL OF PRODUCT THAT INCREASED RELEASES TO GREATER THAN 500 POUNDS PER YEAR.

**Non Numeric Progress:** SPILL OCCURRED DURING UNLOADING PROCEDURES. NEW WRITTEN SOP'S, TRAINING, AND SPCC PLAN. DIKE WAS REBUILT WITH A SUPERVISED OUTLET VALVE. LEVEL ALARMS HAVE BEEN INSTALLED.

**Barriers to P2:**

**Todd County, City of LONG PRAIRIE -- LONG PRAIRIE PACKING CO. -- ERCID -- 771240004**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1994	22720					1997 11,838 1998 16,190	1998 / 1997 = 1.1	No

**Process Code** P26 REFRIGERATING/FREEZING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Barriers to P2:** F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES

**Todd County, City of STAPLES -- 3M STAPLES PLANT -- ERCID -- 771550021**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1995	11005					1997 6,605 1998 4,731	1998 / 1997 = 0.49	Yes

**Process Code** P18 MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** CANNOT PLAN FOR REDUCTION OF RELEASES OR ELIMINATE PROCESS WHICH PRODUCES WASTE/RECYCLING BECAUSE QUANTITIES OF MATERIAL PROCESSED AND METHODS ARE TOTALLY CUSTOMER DRIVEN. WE CONTINUE TO STRIVE TO RECAPTURE ALL GENERATED WASTES FOR RECYCLING.

**Non Numeric Progress:** CONTINUED TO RECYCLE ALL CAPTURABLE AMOUNTS OF COPPER.

**Wabasha County, City of LAKE CITY -- HEAT-N-GLO -- ERCID -- 790670034**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1996	94000	115,000	100,268	100,000	90,000	1997 112,560 1998 100,268	1998 / 1997 = 0.89	Yes

**Process Code** P30 STRIPPING ANY COATING  
Employed Activity  
W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Wabasha County, City of LAKE CITY -- VALLEY CRAFT, INC. -- ERCID -- 790670007**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1990	21400	10,228	9,199	8,279	7,451	1997 14,566 1998 15,293	1998 / 1997 = 0.86	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W74 IMPROVED APPLICATION TECHNIQUES

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

W73 SUBSTITUTED COATING MATERIALS USED

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1990	72138	34,504	31,054	27,949	25,154	1997 23,440 1998 22,180	1998 / 1997 = 0.86	No

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity

W74 IMPROVED APPLICATION TECHNIQUES

W73 SUBSTITUTED COATING MATERIALS USED

Employed Activity

W73 SUBSTITUTED COATING MATERIALS USED

W72 MODIFIED SPRAY SYSTEMS OR EQUIPMENT

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

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

**Wadena County, City of MENAUGA -- SALO MANUFACTURING INC. -- ERCID -- 800450007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1997	20184	20,184	29,016	30,000	30,000	1997 20,184 1998 29,608	1998 / 1997 = 1.4	No

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity

W41 INCREASED PURITY OF RAW MATERIALS

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Waseca County, City of WASECA -- BROWN PRINTING CO. -- ERCID -- 810700008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1991	24198					1997 11,410	1998 / 1997 = 1.04	Yes
							1998 12,020		

**Process Code** P24 PRINTING  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
Employed Activity  
W89

**Non Numeric Objective:** WE ARE CONFIDENT WE WILL FIND A REPLACEMENT THAT WORKS FOR OUR LAST TWO PRESSES. WE CONTINUE TO EXPERIMENT WITH SUBSTITUTES, AS THEY BECOME AVAILABLE FOR TESTING. SINCE 1994, WE HAVE MADE REDUCTIONS EACH YEAR.

**Non Numeric Progress:** SUBSTITUTION HAS BEEN THE DIRECTION OUR COMPANY HAS TAKEN. 9 OUT OF 11 OF OUR PRINTING PRESSES HAVE ADJUSTED TO A NON-GLYCOL TYPE ETCH. CURRENTLY TESTING ANOTHER NON GLYCOL ETCH ON OTHER TWO PRESSES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1991	105077					1997 25,960	1998 / 1997 = 1.04	Yes
							1998 27,270		

**Process Code** P24 PRINTING  
Intended Activity  
W81 CHANGED PRODUCT SPECIFICATIONS  
Employed Activity  
W89

**Non Numeric Objective:** WE ARE CONFIDENT WE WILL FIND A REPLACEMENT THAT WORKS FOR OUR LAST TWO PRESSES. WE CONTINUE TO EXPERIMENT WITH SUBSTITUTES, AS THEY BECOME AVAILABLE FOR TESTING. SINCE 1994, WE HAVE MADE REDUCTIONS EACH YEAR.

**Non Numeric Progress:** SUBSTITUTION HAS BEEN THE DIRECTION OUR COMPANY HAS TAKEN. 9 OUT OF 11 OF OUR PRINTING PRESSES HAVE ADJUSTED TO A NON-GLYCOL TYPE ETCH. CURRENTLY TESTING ANOTHER NON GLYCOL ETCH ON OTHER TWO PRESSES.

**Waseca County, City of WASECA -- JOHNSON COMPONENTS INC. -- ERCID -- 810700040**

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper</i>	1995	125000	150,000	153,180	159,100	164,600	1997 149,598 1998 147,587	1998 / 1997 = 0.85	Yes
<b>Process Code</b> P05	CLEANING ANY MATERIAL (DEGREASING, WASHING, ETC.)								
Intended Activity									
W58	RINSE WATER USED AND TREATED TO MINIMIZE COPPER RELEASE TO THE WASTE STREAM.								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
<b>Process Code</b> P10	ELECTROPLATING								
Intended Activity									
W19	AUTOMATION OF BILL OF MATERIAL ALLOCATION CALCULATION WORK PRACTICE TO USE NEAR NET SIZE TO REDUCE CHIPS.								
Employed Activity									
W19	AUTOMATION OF BILL OF MATERIAL ALLOCATION CALCULATION WORK PRACTICE TO USE NEAR NET SIZE TO REDUCE CHIPS.								
<b>Process Code</b> P15	HEAT TREATING								
Intended Activity									
W14	CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS								
Employed Activity									
W14	CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS								
<b>Process Code</b> P18	MACHINING ANY MATERIAL (POLISHING, ROUTING, DRILLING, ETC.)								
Intended Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
Employed Activity									
W13	IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES								
W14	CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS								
W19	AUTOMATION OF BILL OF MATERIAL ALLOCATION CALCULATION WORK PRACTICE TO USE NEAR NET SIZE TO REDUCE CHIPS.								
<b>Process Code</b> P33	WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)								
Intended Activity									
W58	RINSE WATER USED AND TREATED TO MINIMIZE COPPER RELEASE TO THE WASTE STREAM.								
Employed Activity									
W58	TREATED TO MINIMIZE COPPER RELEASE TO THE WASTE STREAM.								

**Washington County, City of BAYPORT -- ANDERSEN WINDOW CORP. - MAIN FACILITY -- ERCID -- 820150002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>1,2,4-trimethylbenzene</i>	1998	10428					1998 10,861	1998 / 1997 = 1.08	No
<b>Process Code</b> P34	WEATHERIZING (WOOD TREATING, CORROSION INHIBITING, ETC.)								
Intended Activity									
W82	MODIFIED DESIGN OR COMPOSITION								

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Employed Activity  
W82

MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:**

DID NOT HAVE A NUMERIC GOAL IN 1998 BECAUSE PREVIOUS ANNUAL USAGE WAS BELOW REPORTING THRESHOLDS. BECAUSE THE THRESHOLD WAS EXCEEDED IN 1998, THIS PROGRESS REPORT HAS BEEN PREPARED. A 1998 BASELINE QUANTITY OF 10,428 POUNDS WILL BE USED.

**Barriers to P2:**

F10 POLLUTION PREVENTION PROJECTS HAVE BEEN PREVIOUSLY IMPLEMENTED - ADDITIONAL METHODS TO MODIFY OUR PRESERVATIVE FORMULATION ARE UNDER REVIEW.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1988	530					1997 7,551 1998 7,250	1998 / 1997 = 1.08	Yes

**Process Code** P11

EXTRUDING ANY MATERIAL

Intended Activity  
W49

PRIOR TO 1998, WE HAVE EVALUATED NON-CHROMIUM PIGMENTS FOR PAINTS AND VINYL.

Employed Activity  
W49

IN 1998, WE CONTINUED TO EVALUATE NON-CHROMIUM CONTAINING PIGMENTS FOR PAINTS AND VINYL.

**Process Code** P21

ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W49

PRIOR TO 1998, WE HAVE EVALUATED NON-CHROMIUM PIGMENTS FOR PAINTS AND VINYL.

Employed Activity  
W49

IN 1998, WE CONTINUED TO EVALUATE NON-CHROMIUM CONTAINING PIGMENTS FOR PAINTS AND VINYL.

**Non Numeric Objective:**

CHROMIUM COMPOUNDS ARE ESSENTIAL AS PIGMENTS FOR OUR PAINTS AND VINYL. WE CONTINUE TO EVALUATE NON-CHROMIUM PIGMENTS. REPLACEMENT NON-CHROMIUM PIGMENTS THAT PROVIDE SIMILAR DURABILITY ARE NOT AVAILABLE.

**Non Numeric Progress:**

CONTINUE TO EVALUATE NON-CHROMIUM CONTAINING PIGMENTS FOR PAINTS AND VINYL.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1997	47593					1997 47,593 1998 14,356	1998 / 1997 = 1.08	Yes

**Process Code** P34

WEATHERIZING (WOOD TREATING, CORROSION INHIBITING, ETC.)

Employed Activity  
W82

MODIFIED DESIGN OR COMPOSITION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1998	19463					1998 21,030	1998 / 1997 = 1.08	No

**Process Code** P21

ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Non Numeric Objective:** DID NOT HAVE A NUMERIC GOAL IN 1998 BECAUSE PREVIOUS ANNUAL USAGE WAS BELOW REPORTING THRESHOLDS. BECAUSE THE THRESHOLD WAS EXCEEDED IN 1998, THIS PROGRESS REPORT HAS BEEN PREPARED. A 1998 BASELINE QUANTITY OF 19,463 POUNDS WILL BE USED.

**Barriers to P2:** F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1988	785846					1997 64,732	1998 / 1997 = 1.08	Yes
							1998 24,068		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)

Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION  
Employed Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Process Code** P34 WEATHERIZING (WOOD TREATING, CORROSION INHIBITING, ETC.)

Intended Activity  
W82 MODIFIED DESIGN OR COMPOSITION

**Washington County, City of COTTAGE GROVE -- 3M COTTAGE GROVE CENTER -- ERCID -- 820300001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>2,2-dichloro-1,1,1-trifluoroethane</i>	1990						1997 258,440	1998 / 1997 = 1.58	Yes
							1998 51,761		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>2-ethoxyethanol</i>	1990	2760					1997 120,524	1998 / 1997 = 0.91	Yes
							1998 157,830		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>4,4'-isopropylidenediphenol</i>	1990						1997 9,868	1998 / 1997 = 0.49	Yes
							1998 6,041		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Acetonitrile</i>	1990						1998 26,957	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Acrylic Acid</i>	1990	126					1997 86,537	1998 / 1997 = 0.87	Yes
							1998 112,817		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Allyl Chloride</i>	1990						1997 1,181	1998 / 1997 = 0.96	Yes
							1998 568		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1990	52900					1997 13,415	1998 / 1997 = 1.1	Yes
							1998 13,876		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Butyl Acrylate</i>	1990						1997 2,298	1998 / 1997 = 0.65	Yes
							1998 2,103		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chromium Compounds</i>	1990						1998 101,580	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Copper Compounds</i>	1990						1998 202,766	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyclohexane</i>	1990						1997 298,442 1998 311,853	1998 / 1997 = 1.04	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Di(2-ethylhexyl) Phthalate</i>	1990						1998 27,407	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Dichloromethane</i>	1990	37850					1997 41,793	1998 / 1997 = 1.06	Yes
							1998 68,177		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Diisocyanates (includes only 20 chemicals)</i>	1990								Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethyl Acrylate</i>	1990	3330					1997 43,421	1998 / 1997 = 1.01	Yes
							1998 7,360		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1990	4720					1997 109,179 1998 77,146	1998 / 1997 = 0.81	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylene Glycol</i>	1990	1022					1997 53,255 1998 58,334	1998 / 1997 = 1.17	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE IN ALL ASPECTS OF OUR OPERATION.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formaldehyde</i>	1990	3910					1997 105,683 1998 120,313	1998 / 1997 = 0.84	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Formic Acid</i>	1990						1997 66,443 1998 69,771	1998 / 1997 = 0.99	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1990	108					1997 252,008 1998 369,633	1998 / 1997 = 1.07	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrochloric Acid (aerosol forms only)</i>	1990	1540					1997 286,367	1998 / 1997 =	Yes
							1998 606,005		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Hydrogen Fluoride</i>	1990	5300					1997 248,518	1998 / 1997 = 1.84	Yes
							1998 460,537		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Lead Compounds</i>	1990						1997 35,987	1998 / 1997 = 1.03	Yes
							1998 60,813		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Maleic Anhydride</i>	1990	18					1997 324 1998 660	1998 / 1997 = 1.4	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Manganese Compounds</i>	1990						1998 50,269	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methanol</i>	1990	333300					1997 753,900 1998 1,152,511	1998 / 1997 = 0.95	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Acrylate</i>	1990	4600					1997 5,159 1998 15,815	1998 / 1997 = 0.9	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Ethyl Ketone</i>	1990	48200					1997 4,341,451 1998 4,537,310	1998 / 1997 = 0.88	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSION FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Isobutyl Ketone</i>	1990	12020					1997 189,994	1998 / 1997 = 0.98	Yes
							1998 196,668		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Methyl Methacrylate</i>	1990	5240					1997 17,233	1998 / 1997 = 0.7	Yes
							1998 20,097		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N,n-dimethylformamide</i>	1990						1997 58,909	1998 / 1997 = 1.09	Yes
							1998 48,214		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-butyl Alcohol</i>	1990	47					1998 118,439	1998 / 1997 = 1	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-hexane</i>	1990						1997 41,174 1998 47,724	1998 / 1997 = 1.56	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nickel Compounds</i>	1990						1997 25,237 1998 43,006	1998 / 1997 = 1.34	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitrate Compounds (water dissociable)</i>	1990						1997 27,645		Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Nitric Acid</i>	1990	1630					1997 60,606 1998 73,297	1998 / 1997 = 1.16	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phenol</i>	1990					1997	93,461	1998 / 1997 = 0.77	Yes
						1998	79,069		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Phthalic Anhydride</i>	1990					1997	43,442	1998 / 1997 = 0.81	Yes
						1998	32,698		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Sulfuric Acid (aerosol forms only)</i>	1990					1997	28,732	1998 / 1997 =	Yes
						1998	189,914		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1990	1004058					1997 5,453,854	1998 / 1997 = 1.02	Yes
							1998 5,168,261		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluenediisocyanate (mixed isomers)</i>	1990	460					1997 41,525	1998 / 1997 = 1.35	Yes
							1998 2,727		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
Employed Activity  
W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.  
W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Triethylamine</i>	1990						1998 27,348	1998 / 1997 =	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1990	10734					1997 4,529,715 1998 3,953,235	1998 / 1997 = 0.98	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

Employed Activity

W19 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

W58 CONTINUOUSLY TRYING TO IMPROVE PROCESS EFFICIENCY AND CUT WASTE.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1990	6100					1997 72,995 1998 27,478	1998 / 1997 = 0.95	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W19 OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

W58 OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

Employed Activity

W19 OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

W58 OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

**Non Numeric Objective:** ENVIRONMENTAL GOALS FOR THE YEAR 2000 INCLUDE CUTTING OVERALL EMISSIONS TO THE ENVIRONMENT BY 90% AND REDUCING ALL WASTE, AS A PERCENTAGE OF PRODUCT PRODUCED BY 50%. THE COMPANY IS ON TRACK FOR REACHING THESE GOALS OVERALL.

**Non Numeric Progress:** OVERALL EMISSIONS FROM THE SITE DECREASED 66% SINCE 1990.

**Washington County, City of FOREST LAKE -- ROYALINE INDUSTRIES, INC. -- ERCID -- 820490009**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
Styrene	1996	4000	6,000	10,000	5,000	5,000	1997	5,500	1998 / 1997 = 0.8	No
							1998	10,000		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Employed Activity  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Process Code** P16 LAMINATING/PRESSING ANY MATERIAL  
Employed Activity  
W55 CHANGED FROM SMALL VOLUME CONTAINERS TO BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS

**Barriers to P2:**  
F01 INSUFFICIENT CAPITAL TO INSTALL NEW SOURCE REDUCTION EQUIPMENT OR IMPLEMENT NEW SOURCE REDUCTION ACTIVITIES/INITIATIVES  
F03 POLLUTION PREVENTION / SOURCE REDUCTION IS NOT ECONOMICALLY FEASIBLE  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F06 SPECIFIC REGULATORY / PERMIT BURDENS  
F10 OPEN MOLDING

**Washington County, City of OAKDALE -- H.B. FULLER CO. - INDUSTRIAL COATINGS -- ERCID -- 821360019**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
4,4'-isopropylidenediphenol	1995	2512	2,267	2,154	2,046	1,944	1997	2,036	1998 / 1997 = 1.9	Yes
							1998	2,081		

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Process Code** P10 ELECTROPLATING  
Intended Activity  
W14 CHANGE PRODUCTION SCHEDULE TO MAXIMIZE EQUIPMENT AND FEEDSTOCK CHANGEOVERS  
Employed Activity  
W19 LARGE VOLUME PRODUCTS WERE MOVED TO ANOTHER FACILITY OUT OF STATE.

**Washington County, City of ST. PAUL PARK -- MARATHON ASHLAND PETROLEUM, LLC -- ERCID -- 821650001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>1,2,4-trimethylbenzene</i>	1996	75455	67,909	61,118	61,118	61,118	125,207	145,045	1998 / 1997 = 1.04	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

- W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS
- W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES
- W35 INSTALLED VAPOR RECOVERY SYSTEMS

**Process Code** P25 REFINING

Intended Activity

- W19 IN-PROCESS HYDROCARBON RECYCLING; LDAR
- W58 UPGRADE OF STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS.
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**

- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F10 17,158 POUNDS FROM TANK CLEANING THAT OCCURS ONCE EVERY 10-15 YEARS.
- F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>1,3-butadiene</i>	1996	3763	3,500	3,300	3,300	3,300	912	873	1998 / 1997 = 1.04	Yes

**Process Code** P25 REFINING

Intended Activity

- W19 IN-PROCESS RECYCLING OF HYDROCARBONS VERSUS SEWERING/RECOVERY; LDAR.
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES
- W58 CLOSED LOOP SAMPLERS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ammonia</i>	1996	4781	4,781	4,781	4,781	4,781	1997 7,547 1998 6,499	1998 / 1997 = 1.04	No

**Process Code** P25

REFINING

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W58

INSTALLATION OF FOUL WATER STRIPPER SYSTEM-PRE 1990; UPGRADE OF WASTEWATER TREATMENT SYSTEM IN 1/94.

W58

INSTALLATION OF FOUL WATER STRIPPER SYSTEM-PRE 1990; UPGRADE OF WASTEWATER TREATMENT SYSTEM IN 1/94.

**Barriers to P2:**

F10 PROCESS UPSETS AND DOWNTIME OF FOUL WATER STRIPPER.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Benzene</i>	1996	87379	80,000	75,000	70,000	70,000	1997 84,939 1998 77,514	1998 / 1997 = 1.04	No

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03

CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W35

INSTALLED VAPOR RECOVERY SYSTEMS

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Process Code** P25

REFINING

Intended Activity

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

W58

UPGRADE OF STORAGE TANKS TO ADD INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS.

W19

IN-PROCESS RECYCLING OF HYDROCARBONS; LDAR.

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Biphenyl</i>	1996	1399	1,250	1,250	1,250	1,250	1997 1,551 1998 1,342	1998 / 1997 = 1.04	No

**Process Code** P25

REFINING

Intended Activity

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W19 IN-PROCESS RECYCLING OF HYDROCARBONS VERSUS SEWERING/RECOVERY; LDAR.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 NEED TO IMPROVE TRAINING EFFORTS ON POLLUTION PREVENTION INITIATIVES.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Carbon Disulfide</i>	1996	1	1	1	1	1	1997 1	1998 / 1997 = 1.04	Yes
							1998 1		

**Process Code** P25 REFINING  
Intended Activity  
W39 VOLUNTARY LDAR PROGRAM FOR SULFUR RECOVERY UNIT.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Carbonyl Sulfide</i>	1996	2	2	2	2	2	1997 2	1998 / 1997 = 1.04	No
							1998 3		

**Process Code** P25 REFINING  
Intended Activity  
W31 IMPROVED STORAGE OR STACKING PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** 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

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Chlorine</i>	1996	250	250	250	250	250	1997 230	1998 / 1997 = 1.04	No
							1998 6,202		

**Process Code** P33 WATER TREATING (NEUTRALIZING, EVAPORATING, ETC.)  
Intended Activity  
W54 INSTITUTED BETTER CONTROLS ON OPERATING BULK CONTAINERS TO MINIMIZE DISCARDING OF EMPTY CONTAINERS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Barriers to P2:** F10 REVIEWING CHLORINE LDAR CRITERIA TO SEE WHERE POTENTIAL 1998 RELEASES MIGHT HAVE BEEN OR IF CALCUALTED EMISSIONS ARE ERRONEOUS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Cyclohexane</i>	1996	21342	20,000	20,000	19,000	19,000	1997 24,679 1998 26,874	1998 / 1997 = 1.04	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W35 INSTALLED VAPOR RECOVERY SYSTEMS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P25 REFINING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 UPGRADING OF STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED-LOOP SAMPLERS.  
W19 IN-PROCESS RECYCLING OF HYDROCARBONS; LDAR.

**Barriers to P2:**  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Ethylbenzene</i>	1996	33822	30,440	27,400	27,400	27,400	1997 48,209 1998 53,345	1998 / 1997 = 1.04	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W35 INSTALLED VAPOR RECOVERY SYSTEMS  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

**Process Code** P25 REFINING  
Intended Activity  
W19 IN-PROCESS RECYCLING OF HYDROCARBONS; LDAR  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 UPGRADING OF STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS.

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Ethylene</i>	1996	16277	14,650	13,185	13,185	13,185	1997 17,273	1998 13,450	1998 / 1997 = 1.04	No

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03

CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W36

IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

W32

IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W35

INSTALLED VAPOR RECOVERY SYSTEMS

**Process Code** P25

REFINING

Intended Activity

W19

IN-PROCESS RECYCLING; LDAR.

W58

UPGRADE STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS.

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**

F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

F10 SLIGHTLY EXCEEDED OBJECTIVE - MAY BE ABLE TO IMPROVE OPERATIONS TO MEET OBJECTIVE.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Hydrogen Fluoride</i>	1996	325045	292,540	263,286	263,286	263,286	1997 425,789	1998 205,346	1998 / 1997 = 1.04	Yes

**Process Code** P25

REFINING

Intended Activity

W51

INSTITUTED RECIRCULATION WITHIN A PROCESS

W13

IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1999		
<i>Molybdenum Trioxide</i>	1999	0					1998 0		1998 / 1997 = 1.04	Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P25      REFINING  
Employed Activity  
W13      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58      USED AS A CATALYST. IT IS USED/REUSED UNTIL ITS PERFORMANCE OR ACTIVITY MAKE IT UNECONOMICAL TO USE, AT WHICH TIME IT IS REPLACED.  
**Non Numeric Objective:** NEW COMPOUND FOR 1998.  
**Non Numeric Progress:** NEW COMPOUND FOR 1998.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>N-hexane</i>	1995	57462	57,462	51,716	51,716	51,716	1997 104,865 1998 99,749	1998 / 1997 = 1.04	No	

**Process Code** P02      CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W36      IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32      IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03      CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W36      IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W35      INSTALLED VAPOR RECOVERY SYSTEMS  
W32      IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P25      REFINING  
Intended Activity  
W19      IN-PROCESS RECYCLING OF HYDROCARBONS; LDAR  
W58      UPGRADING STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS  
W13      IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Naphthalene</i>	1996	17507	15,756	14,180	14,180	14,180	1997 15,723 1998 22,463	1998 / 1997 = 1.04	No	

**Process Code** P02      CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W36      IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32      IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
**Process Code** P03      CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
Intended Activity  
W36      IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32      IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

W35 INSTALLED VAPOR RECOVERY SYSTEMS  
**Process Code** P25 REFINING  
 Intended Activity  
 W19 IN-PROCESS RECYCLING OF HYDROCARBONS VERSUS SEWERING/RECOVERY; LDAR.  
 W58 UPGRADING OF STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS.  
 W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**  
 F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
 F10 7,767 POUNDS DUE TO TANK CLEANING WHICH OCCURS ONCE EVERY 10-15 YEARS.  
 F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Polycyclic Aromatic Compounds (includes only 19 chemicals)</i>	1996	800	800	800	800	800			Yes

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W19

**Process Code** P25 REFINING  
 Intended Activity  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1998	1999		
<i>Propylene</i>	1996	27549	24,794	22,315	22,315	22,315	1998	24,732	1998 / 1997 = 1.04	Yes

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
 Intended Activity  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)  
 Intended Activity  
 W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
 W35 INSTALLED VAPOR RECOVERY SYSTEMS  
 W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P25 REFINING  
 Intended Activity  
 W58 UPGRADE STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED-LOOP SAMPLERS.

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W19 IN-PROCESS RECYCLING OF HYDROCARBONS VERSUS SEWERING/RECOVERY; LDAR.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Styrene</i>	1996	1328	1,196	1,077	1,077	1,077	1997 1,074 1998 23,074	1998 / 1997 = 1.04	No	

**Process Code** P25 REFINING  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W19 LEAK DETECTION AND REPAIR (LDAR)  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:** F10 MAJORITY OF WASTE FROM TANK CLEANING AND ASPHALT SPILLS. THESE ARE INFREQUENT ACTIVITIES AND ACCOUNTED FOR 21,420 POUNDS IN 1998.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Tetrachloroethylene</i>	1997	0					1997 0 1998 3,403	1998 / 1997 = 1.04	Yes	

**Process Code** P25 REFINING  
Intended Activity  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Non Numeric Objective:** INCLUDE IN LEAK DETECTION AND REPAIR PROGRAM. MINIMIZE USE AND CONSUME ALL MATERIAL IN THE PROCESS. NUMERIC OBJECTIVES TO BE ESTABLISHED BY 12/31/99.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000				
<i>Toluene</i>	1996	188540	136,038	122,434	122,434	122,434	1997 237,668 1998 243,326	1998 / 1997 = 1.04	No	

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)  
Intended Activity  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03 CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W35 INSTALLED VAPOR RECOVERY SYSTEMS

**Process Code** P25 REFINING

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity

W58 UPGRADE OF STORAGE TANKS TO INTERNAL FLOATING ROOFS INSTALLATION OF CLOSED LOOP SAMPLERS.  
W19 IN PROCESS RECYCLING OF HYDROCARBONS; LDAR  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

**Barriers to P2:**

F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1996	219016	184,582	166,124	166,124	166,124	1997 291,004	1998 311,589	1998 / 1997 = 1.04	No

**Process Code** P02

CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P03

CHEMICAL TRANSFERRING (PACKAGING, METERING, ETC.)

Intended Activity

W35 INSTALLED VAPOR RECOVERY SYSTEMS  
W36 IMPLEMENTED INSPECTION OR MONITORING PROGRAM OF POTENTIAL SPILL OR LEAK SOURCES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS

**Process Code** P25

REFINING

Intended Activity

W19 IN-PROCESS HYDROCARBON RECYCLING AND LDAR  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W58 UPGRADE OF STORAGE TANKS TO INTERNAL FLOATING ROOFS; INSTALLATION OF CLOSED LOOP SAMPLERS

**Barriers to P2:**

F10 VAPOR RECOVERY UNIT AT LIGHT OIL LOADING REDUCED EMISSIONS BUT INCREASED QUANTITY RECYCLED ON-SITE, THEREFORE, NO NET REDUCTION IN THE SUM OF SECTIONS 8.1-8.7 OF THE FORM R.  
F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS  
F02 LACK OF TECHNICAL INFORMATION ON POLLUTION PREVENTION TECHNIQUES APPLICABLE TO THE SPECIFIC PRODUCTION PROCESS

**Washington County, City of STILLWATER -- 3M-STILLWATER -- ERCID -- 821700005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Diisocyanates (includes only 20 chemicals)</i>	1996	370	1,710	1,540	1,385	1,247	1997 1,959	1998 1,902	1998 / 1997 = 0.78	No

**Process Code** P01

CASTING ANY MATERIAL

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

Intended Activity  
W19 YIELD IMPROVEMENT ON PRINTING LINES.  
Employed Activity  
W19 YIELD IMPROVEMENT ON PRINTING LINES.

**Barriers to P2:** F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Glycol Ethers</i>	1991	16700	12,918	12,273	11,660	11,075	1997 22,411 1998 19,962	1998 / 1997 = 0.78	No

**Process Code** P24 PRINTING  
Intended Activity  
W89 YIELD IMPROVEMENT ON PRINTING LINES.  
Employed Activity  
W89 YIELD IMPROVEMENT ON PRINTING LINES.

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>N-methyl-2-pyrrolidone</i>	1997	14952	14,952	14,204	13,494	12,819	1997 14,952 1998 15,056	1998 / 1997 = 0.78	No

**Process Code** P01 CASTING ANY MATERIAL  
Intended Activity  
W51 INSTITUTED RECIRCULATION WITHIN A PROCESS

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Xylene (mixed isomers)</i>	1991	73600	56,951	54,104	51,399	48,829	1997 78,717 1998 57,648	1998 / 1997 = 0.78	No

**Process Code** P08 DRYING  
Intended Activity  
W58 YIELD IMPROVEMENT ON PRINTING LINES.  
Employed Activity  
W58 YIELD IMPROVEMENT ON PRINTING LINES.  
**Process Code** P24 PRINTING  
Intended Activity  
W58 YIELD IMPROVEMENT ON PRINTING LINES.

Employed Activity  
W58 YIELD IMPROVEMENT ON PRINTING LINES.

**Barriers to P2:** F08 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE ECONOMICALLY FEASIBLE

**Washington County, City of WOODBURY -- ECOWATER SYSTEMS, INC. -- ERCID -- 821910002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Styrene	1990	9000					1997 6,700	1998 / 1997 = 0.99	No
							1998 5,900		

**Process Code** P11 EXTRUDING ANY MATERIAL

Intended Activity  
W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

Employed Activity  
W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING

Intended Activity  
W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

W49 CONTINUE TO RESEARCH AND EXPERIMENT WITH ALTERNATIVES TO THE ABS PLASTICS AND STYRENE RESINS CURRENTLY USED.

Employed Activity  
W19 CONTINUE TO UTILIZE SOUND OPERATING AND MAINTENANCE PRACTICES.

W49 RESEARCH AND EXPERIMENT WITH ALTERNATIVES TO THE ABS PLASTICS AND STYRENE RESINS CURRENTLY USED IN OUR MANUFACTURING PROCESSES.

**Non Numeric Objective:** CONTINUE TO RESEARCH AND EXPERIMENT WITH ALTERNATIVES TO ABS PLASTICS AND STYRENE RESINS AND INVESTIGATE ABS PLASTICS AND STYRENE RESINS WITH LOWER RESIDUAL STYRENE CONCENTRATIONS. ALTERNATIVE PLASTICS MUST BE APPROVED BY OUR CUSTOMERS.

**Non Numeric Progress:** CONTINUE TO RESEARCH AND EXPERIMENT WITH ALTERNATIVES TO ABS PLASTICS AND STYRENE RESINS AND INVESTIGATE ABS PLASTICS AND STYRENE RESINS WITH LOWER RESIDUAL STYRENE CONCENTRATIONS. ALTERNATIVE PLASTICS MUST BE APPROVED BY OUR CUSTOMERS.

**Barriers to P2:**  
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

**Watonwan County, City of ST. JAMES -- WESTIN AUTOMOTIVE PRODUCTS, INC. -- ERCID -- 830900001**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
Nickel	1994	4604	327	48			1997 9,009	1998 / 1997 = 1.1	Yes
							1998 5,151		

**Process Code** P10 ELECTROPLATING

Intended Activity  
W65 REDESIGNED PARTS RACKS TO REDUCE DRAGOUT  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING



**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W19 REUSE THE SPENT RESIN AND SAND MIXTURE WHENEVER POSSIBLE.  
 Employed Activity  
 W19 SPENT RESIN AND SAND MIXTURE IS REUSED ONSITE WHENEVER POSSIBLE  
**Non Numeric Objective:** AN OBJECTIVE FOR REDUCING THE GENERATION OR RELEASE OF NAPHTHALENE HAS NOT BEEN DETERMINED TO DATE.

**Non Numeric Progress:** BEGINNING IN 8/98, WE CONTRACTED WITH A CEMENT KILN WHO REUSES THE SPENT SAND/RESIN MIXTURE AS FILLER FOR CEMENT. PREVIOUSLY, ALL SPENT SAND AND RESIN WAS TRANSFERRED TO A LANDFILL. SUCCESSFULLY REDUCED NAPHTHALENE RELEASES BY 12% IN 1998.

**Barriers to P2:** F10 CURRENTLY NOT A WRITTEN OBJECTIVE. PROGRESS WILL BE DETAILED IN NEXT YEAR'S PROGRESS REPORT AFTER AN OBJECTIVE HAS BEEN DEFINED.

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
<i>Phenol</i>							1997	1,260	1998 / 1997 = 0.88	No
							1998	1,530		

**Process Code** P01 CASTING ANY MATERIAL  
 Intended Activity  
 W19 REUSE THE SPENT RESIN AND SAND MIXTURE WHENEVER POSSIBLE. RESEARCH POTENTIAL REUSE OPTIONS FOR THE SPENT RESIN AND SAND MIXTURE.  
 Employed Activity  
 W19 SPENT RESIN AND SAND MIXTURE IS REUSED ONSITE WHENEVER POSSIBLE.  
**Non Numeric Objective:** AN OBJECTIVE FOR REDUCING THE GENERATION OR RELEASE OF PHENOL HAS NOT BEEN DETERMINED TO DATE.

**Non Numeric Progress:** BEGINNING IN 8/98, WE CONTRACTED WITH A CEMENT KILN WHO REUSES THE SPENT SAND/RESIN MIXTURE AS FILLER FOR CEMENT. PREVIOUSLY, ALL SPENT SAND AND RESIN WAS TRANSFERRED TO A LANDFILL.

**Barriers to P2:** F10 CURRENTLY NOT A WRITTEN OBJECTIVE. PROGRESS WILL BE DETAILED IN NEXT YEAR'S PROGRESS REPORT AFTER AN OBJECTIVE HAS BEEN DEFINED.

**Winona County, City of WINONA -- BEHRENS INC -- ERCID -- 851450092**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective	
	Year	Quantity	1997	1998	1999	2000				
<i>Zinc Compounds</i>	1997	51000					1997	51,000	1998 / 1997 = 0	Yes
							1998	50,000		

**Process Code** P09 ELECTROLESS/IMMERSION COATING  
 Intended Activity  
 W25 INSTITUTED CLEARINGHOUSE TO EXCHANGE MATERIALS THAT WOULD OTHERWISE BE DISCARDED  
 W19 RECYCLE ALL MATERIAL  
 Employed Activity  
 W25 INSTITUTED CLEARINGHOUSE TO EXCHANGE MATERIALS THAT WOULD OTHERWISE BE DISCARDED  
 W19 RECYCLE ALL MATERIAL.

**Non Numeric Objective:** ALL MATERIAL WAS RECYCLED.

**Non Numeric Progress:** WE CONTINUED TO RECYCLE ALL BYPRODUCTS FROM THIS PROCESS FOR RECYCLING.

**Winona County, City of WINONA -- PEERLESS CHAIN CO. -- ERCID -- 851450002**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Zinc Compounds</i>	1994	24898	23,000	17,600	17,250	16,900	1997 16,850 1998 17,605	1998 / 1997 = 1.14	Yes

**Process Code P10 ELECTROPLATING**

Intended Activity

- W51 INSTITUTED RECIRCULATION WITHIN A PROCESS
- W67 IMPROVED RINSE EQUIPMENT DESIGN
- W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES

Employed Activity

- W24 INSTITUTED BETTER LABELING PROCEDURES
- W21 INSTITUTED PROCEDURES TO ENSURE THAT MATERIALS DO NOT STAY IN INVENTORY BEYOND SHELF-LIFE
- W68 IMPROVED RINSE EQUIPMENT OPERATION

**Winona County, City of WINONA -- WE-NO-NAH CANOE -- ERCID -- 851450071**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Styrene</i>	1990	9465					1997 7,892 1998 8,322	1998 / 1997 = 0.9	No

**Process Code P12 FIBERGLASS PRODUCT MANUFACTURING**

Intended Activity

- W42 SUBSTITUTED RAW MATERIALS
- W82 MODIFIED DESIGN OR COMPOSITION

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS
- W82 MODIFIED DESIGN OR COMPOSITION

**Barriers to P2:**

- F05 TECHNICAL LIMITATIONS OF THE PRODUCTION PROCESS
- F07 POLLUTION PREVENTION PREVIOUSLY IMPLEMENTED - ADDITIONAL REDUCTION DOES NOT APPEAR TO BE TECHNICALLY FEASIBLE

**Wright County, City of HOWARD LAKE -- DURA SUPREME, INC. -- ERCID -- 860850007**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported	P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000			
<i>Toluene</i>	1991	14000	12,600	12,000	11,400	2,000	1997 15,159		Yes

Minnesota Pollution Prevention Progress  
Report Summary of Activities for 1998

State of Minnesota  
Department of Public Safety  
Emergency Response Commission

Sorted by County, City, Facility

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Xylene (mixed isomers)</i>	1991	22000	17,820	16,900	16,000	15,000	1997	18,782	1998 / 1997 = 1.05	No
							1998	25,501		

**Process Code** P21 ORGANIC COATING (PAINTING, VARNISHING, ADHESIVE, ETC.)  
Intended Activity  
W42 SUBSTITUTED RAW MATERIALS  
Employed Activity  
W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

**Wright County, City of MAPLE LAKE -- SUN PATIO INC. -- ERCID -- 860890008**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>Styrene</i>	1997	13240	13,240	18,945	18,945	18,945	1997	13,240	1998 / 1997 = 0.77	No
							1998	18,945		

**Process Code** P12 FIBERGLASS PRODUCT MANUFACTURING  
Intended Activity  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING  
Employed Activity  
W39 TRAIN IN HOUSE TEAM TO RESPOND QUICKLY TO SPILLS AND LEAKS.  
W74 IMPROVED APPLICATION TECHNIQUES  
W32 IMPROVED PROCEDURES FOR LOADING, UNLOADING, AND TRANSFER OPERATIONS  
W13 IMPROVED MAINTENANCE SCHEDULING, RECORDKEEPING, OR PROCEDURES  
W52 MODIFIED EQUIPMENT, LAYOUT, OR PIPING

**Barriers to P2:** F10 AN ECONOMICALLY FEASIBLE ALTERNATIVE SOURCE CHEMICAL DOES NOT YET EXIST FOR OUR PROCESS.

**Wright County, City of MONTROSE -- KNIGHT COLORS & CHEMICALS CO. -- ERCID -- 861200005**

Chemical Name	Baseline		Numeric Objective, If Applicable / Releases and Transfers (#)				Reported		P.R.	Met Objective
	Year	Quantity	1997	1998	1999	2000	1997	1998		
<i>N-hexane</i>	1998	10000	12,000	10,000	2,500	100	1997 15,531	1998 10,000	1998 / 1997 = 0.64	No

**Process Code** P02 CHEMICAL MIXING (DENATURING, FORMULATING, BLENDING, ETC.)

Intended Activity

- W42 SUBSTITUTED RAW MATERIALS

Employed Activity

- W42 SUBSTITUTED RAW MATERIALS

**Barriers to P2:** F04 CONCERN THAT PRODUCT QUALITY MAY DECLINE AS A RESULT OF SOURCE REDUCTION

## P CODES MANUFACTURING 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	De-icing
P07	Developing (non-photographic)
P08	Drying
P09	Electroless/Immersion coating
P10	Electroplating
P11	Extruding any material
P12	Fiberglass Product Manufacturing
P13	Foam Blowing
P14	Food Processing (human and animal)
P15	Heat Treating
P16	Laminating/Pressing any material
P17	Lens Grinding
P18	Machining any material (polishing, routing, drilling, etc.)
P19	Metal Treating (anodizing, phosphating, pickling, etc.)
P20	Molding any material (bending, forming, shaping, etc.)
P21	Organic coating (painting, varnishing, adhesive, etc.)
P22	Paper Manufacturing
P23	Photographic processing
P24	Printing
P25	Refining
P26	Refrigerating/Freezing
P27	Regenerating resin
P28	Smelting
P29	Sterilizing (fumigating, disinfecting, etc.)
P30	Stripping any coating
P31	Tanning
P32	Vacuum Depositing (vapor, ion, epitaxy, etc.)
P33	Water Treating (neutralizing, evaporating, etc.)
P34	Weatherizing (wood treating, corrosion inhibiting, etc.)
P35	Welding any material (soldering, brazing, joining, etc.)

## **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

## Facilities not subject to Pollution Prevention Progress reporting in 1998

<u>Facility Name &amp; Location</u>	<u>ERC ID #</u>	<u>County</u>
Safety-Kleen Corp., Blaine	02-020-0027	Anoka
Cylinder City, Inc., Blaine	02-020-0071	Anoka
Spec Plating Corp., Fridley	02-055-0072	Anoka
Carter-Day International, Fridley	02-055-0075	Anoka
Life Fitness Consumer Div., Ramsey	02-095-0015	Anoka
Vision-Ease, Inc., Ramsey	02-095-0019	Anoka
Georgia-Pacific Corp., Bemidji	04-015-0001	Beltrami
Gorecki Mfg., Inc., Foley	05-010-0015	Benton
Associated Milk Producers, Inc., New Ulm	08-080-0002	Brown
Mammoth, Inc., Chaska	10-035-0041	Carver
Super Radiator Coils, Chaska	10-035-0047	Carver
Amoco Oil Co., Moorhead	14-145-0005	Clay
NSP- Black Dog Plant, Burnsville	19-006-0002	Dakota
Ecolab, Inc., Eagan	19-025-0004	Dakota
Rayfo, Inc., Rosemount	19-145-0011	Dakota
U of M - Rosemount Research Center, Rosemount	19-145-0017	Dakota
WasteQuip/Rayfo, Rosemount	19-145-0051	Dakota
Van Hoven Co., Inc., South St. Paul	19-155-0003	Dakota
Progress Casting Group, Albert Lea	24-005-0044	Freeborn
Farmland Foods, Inc., Albert Lea	24-005-0050	Freeborn
Dairy Farmers of America, Zumbrota	25-160-0002	Goodhue
Vision Ease Lens, Brooklyn Center	27-010-0031	Hennepin
Gustafson, Inc., Eden Prairie	27-056-0069	Hennepin
NSP- Riverside Plant, Minneapolis	27-135-0064	Hennepin
Douglas Corp., Minneapolis	27-135-0570	Hennepin
Pechiney Plastic Pkg., St. Louis Park	27-215-0006	Hennepin
Boswell Energy Center-MN Power, Cohasset	31-068-0001	Itasca
Stanley Hydraulic Tools, Two Harbors	38-035-0026	Lake
Seneca Foods Corp., Montgomery	40-080-0001	Le Sueur
Haugen Furniture Co., Hutchinson	43-055-0037	McCleod
Dairy Farmers of America, Winsted	43-109-0002	McCleod
Hauenstein & Burmeister, Minneapolis	27-135-0281	Hennepin
Associated Milk Producers, Inc., Dawson	37-045-0004	Lac Qui Parle
Davisco Le Sueur Cheese Division, Le Sueur	40-070-0011	Le Sueur
Fox Lake Plant, Sherburn	46-115-0002	Martin
Anderson Chemical Co., Litchfield	47-100-0005	Meeker
Austin Utilities-NE Power Station, Austin	50-015-0089	Mower
Rochester Public Utilities-Silver Lake, Rochester	55-095-0074	Olmsted
Geotek, Inc., Stewartville	55-115-0024	Olmsted
Dairy Farmers of America, Fergus Falls	56-165-0005	Otter Tail
Ottertail Power Co.-Hoot Lake, Fergus Falls	56-165-0012	Otter Tail
Doane Pet Care Co., Perham	56-319-0006	Otter Tail
U of M - NW Experiment Station, Crookston	60-065-0018	Polk
BP Amoco Oil, Roseville	62-060-0002	Ramsey
NSP - High Bridge, St. Paul	62-070-0031	Ramsey
Loes Enterprises, Inc., St. Paul	62-070-0036	Ramsey
Van Waters & Rogers, Inc. St. Paul	62-070-0079	Ramsey
Gross-Given Mfg. Co., Inc., St. Paul	62-070-0108	Ramsey
Nor-Lakes Services Midwest, Inc., St. Paul	62-070-0189	Ramsey

Huot Mfg. Co., St. Paul	62-070-0358	Ramsey
U of M - SW Experiment Station, Lamberton	64-059-0003	Redwood
U of M - SW Experiment Station, Redwood Falls	64-110-0031	Redwood
IBP, Inc., Luverne	67-055-0006	Rock
Laskin Energy Center-MN Power, Aurora	69-035-0001	St. Louis
Fremont Industries, Inc., Shakopee	70-085-0008	Sibley
Becker RDF Ash Landfill, Becker	71-009-0018	Sherburne
Associated Milk Producers, Inc., Paynesville	73-184-0001	Stearns
Viracon, Inc., Owatonna	74-070-0065	Steele
Slidell, Inc., Owatonna	74-070-0135	Steele
U of M - SW Experiment Station, Waseca	81-070-0010	Waseca
NSP – A.S. King, Bayport	82-015-0005	Washington
LSP – Cottage Grove, L.P., Cottage Grove	82-030-0033	Washington
Land O' Lakes, Woodbury	82-191-0001	Washington
Badger Equipment Co., Winona	85-145-0037	Washington
AlliedSignal, Buffalo	86-019-0025	Winona
Sunny Fresh Foods, Monticello	86-109-0004	Wright

## 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, and is in the process of adding more substances (about 400).

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

## Discussion of the Indexing System Results

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

The MPCA views the modeling of organic substances with greater confidence than the modeling of inorganics or metals. Current models are not able to simulate the intricacies of the speciation process. The present modeling is based on total metal concentration, and the speciated forms were not considered. However, models for speciated forms of mercury and other metals are being evaluated. The acidification caused by inorganic (as well as organic) acidity was not factored into this method.

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

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

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

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

## **Application of Indexing System to Air Emissions from TRI Data**

For this report, the Minnesota Emergency Response Commission applied the Indexing System Values (weighted emissions) to state-wide air emissions from the 1998 Minnesota Toxic Release Inventory. The next five 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 1998 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)

**Chemicals Released for the year 1999 in order  
from the largest to smallest total air releases**

**State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in pounds)**

Sections: 5.1, 5.2 of EPA Form "R"

<b>Chemical</b>	<b>Fugitive Air</b>	<b>Stack Air</b>	<b>Total Air Releases</b>
Xylene (mixed isomers)	201,082	1,765,489	1,966,571
N-hexane	1,010,104	955,584	1,965,688
Toluene	283,552	1,661,735	1,945,287
Styrene	542,243	1,103,135	1,645,378
Methanol	103,834	1,389,290	1,493,124
Ammonia	112,887	1,206,747	1,319,634
Methyl Ethyl Ketone	98,563	806,476	905,039
Glycol Ethers	161,508	656,750	818,258
N-butyl Alcohol	130,934	571,866	702,800
Hydrogen Fluoride	1,393	435,642	437,035
Hydrochloric Acid (aerosol forms only)	941	435,258	436,199
1,1-dichloro-1-fluoroethane	72,219	340,000	412,219
Trichloroethylene	60,163	284,947	345,110
Carbonyl Sulfide	3	282,820	282,823
Sulfuric Acid (aerosol forms only)	270	267,854	268,124
Methyl Isobutyl Ketone	11,242	246,271	257,513
Tetrachloroethylene	9,994	180,154	190,148
Dichloromethane	63,120	113,184	176,304
Ethylbenzene	19,476	147,600	167,076
Formaldehyde	6,400	155,968	162,368
1,2,4-trimethylbenzene	26,109	116,772	142,881
Cyclohexane	15,148	78,543	93,691
Phenol	16,836	74,194	91,030
Chloromethane	90,616	0	90,616
2-chloro-1,1,1,2-tetrafluoroethane	0	84,552	84,552
Barium Compounds	2,632	76,854	79,486
Acetaldehyde	0	50,187	50,187
2,2-dichloro-1,1,1-trifluoroethane	4	48,420	48,424
Nitric Acid	2,690	44,816	47,506
Propylene	35,647	6,039	41,686
1,3-dichloro-1,1,2,2,3-pentafluoropropane	1,702	32,341	34,043
Zinc Compounds	3,252	29,701	32,953
Methyl Methacrylate	5,875	26,312	32,187
Ethylene Glycol	31,132	194	31,326
N-methyl-2-pyrrolidone	200	31,096	31,296
1-chloro-1,1-difluoroethane	30,320	0	30,320
3,3-dichloro-1,1,1,2,2-pentafluoropropane	1,378	26,180	27,558
Copper	5,041	21,858	26,899
Benzene	8,472	16,274	24,746
2-ethoxyethanol	5,528	17,949	23,477
Chlorine	19,536	2,229	21,765
Bromomethane	21,224	0	21,224
Chlorine Dioxide	10	19,093	19,103
Nickel Compounds	2,992	14,494	17,486
Manganese Compounds	1,414	13,978	15,392
Naphthalene	7,234	7,433	14,667
Lead	8,856	3,758	12,614
Formic Acid	7,116	5,215	12,331

**Chemicals Released for the year 1999 in order  
from the largest to smallest total air releases**

**State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in pounds)**

Sections: 5.1, 5.2 of EPA Form "R"

<b>Chemical</b>	<b>Fugitive Air</b>	<b>Stack Air</b>	<b>Total Air Releases</b>
Ethylene	10,331	1,701	12,032
Vinyl Acetate	0	11,942	11,942
N,n-dimethylformamide	9,854	123	9,977
Chloroform	5,300	3,300	8,600
Phosphoric Acid	669	7,282	7,951
Tert-butyl Alcohol	0	7,500	7,500
Copper Compounds	296	6,419	6,715
Toluenediisocyanate (mixed isomers)	719	4,538	5,257
Zinc (fume or dust)	1,199	3,879	5,078
Chromium Compounds	2,773	2,224	4,997
Lead Compounds	287	4,403	4,690
Manganese	1,027	3,491	4,518
Nickel	899	2,887	3,786
Acrylic Acid	640	3,095	3,735
Ethyl Acrylate	3,339	361	3,700
Methyl Acrylate	2,302	860	3,162
Chromium	427	2,706	3,133
Diisocyanates (includes only 20 chemicals)	256	2,464	2,720
Dimethylamine	5	2,465	2,470
Peracetic Acid	66	1,811	1,877
Dicyclopentadiene	374	1,183	1,557
Biphenyl	1,243	16	1,259
Diisocyanates	286	948	1,234
Cyanide Compounds	290	941	1,231
Aluminum (fume or dust)	568	560	1,128
Propylene Oxide	750	0	750
1,4-dioxane	35	690	725
Chlorodifluoromethane	714	0	714
1,3-butadiene	391	275	666
Phthalic Anhydride	73	590	663
Barium	260	260	520
Polycyclic Aromatic Compounds	509	2	511
Vanadium (fume or dust)	255	255	510
4,4'-isopropylidenediphenol	26	469	495
Maleic Anhydride	161	316	477
Molybdenum Trioxide	15	399	414
Antimony Compounds	260	91	351
Dimethyl Phthalate	0	309	309
Di(2-ethylhexyl) Phthalate	98	158	256
Aluminum Oxide (fibrous forms)	0	255	255
Allyl Chloride	123	75	198
Antimony	110	45	155
Ethylene Oxide	0	136	136
Arsenic	50	40	90
Selenium Compounds	5	42	47
Acetonitrile	6	36	42
Anthracene	39	2	41
Cobalt	0	33	33

Chemicals Released for the year 1999 in order  
from the largest to smallest total air releases

State of Minnesota  
Department of Public Safety  
Emergency Response Commission  
(Amount in pounds)

Sections: 5.1, 5.2 of EPA Form "R"

Chemical	Fugitive Air	Stack Air	Total Air Releases
Butyl Acrylate	14	10	24
Cobalt Compounds	0	20	20
Dichlorodifluoromethane	5	0	5
Trichlorofluoromethane	5	0	5
Triethylamine	0	2	2
Carbon Disulfide	1	0	1
1,3-Phenylenediamine	0	0	0
Toluene-2,4-diisocyanate	0	0	0
Sodium Dimethyldithiocarbamate	0	0	0
Dichlorotetrafluoroethane	0	0	0
4,4'-methylenedianiline	0	0	0
Catechol	0	0	0
Nabam	0	0	0
Nitrate Compounds	0	0	0
Nitrate compounds (water dissociable)	0	0	0
Decabromodiphenyl Oxide	0	0	0
2-methoxyethanol	0	0	0
<b>Totals</b>	3,287,947	13,936,861	17,224,808

**AIR TOXICS INDEXING SYSTEM**

<b>Substance</b>	<b>Rank</b>	<b>Total Amount (pounds/yr) of Air Emissions</b>	<b>Index Value (log units)</b>	<b>Index (pounds/yr) Weighted Emissions</b>	<b>Basis for the Index</b>
lead (Pb)	1	17304	15.55	19.79	water
copper	2	33498	15.06	19.59	water
chromium (VI)*	3	8130	15.63	19.54	water
nickel	4	21012	14.96	19.28	aq biota
zinc	5	38031	14.03	18.61	water
antimony	6	506	15.53	18.23	aq biota
chloroform	7	8600	14.17	18.10	air
bromomethane (methy bromide)	8	21224	13.50	17.83	air
manganese	9	19722	13.38	17.68	water
barium	10	80006	12.69	17.59	water
tetrachloroethylene	11	190148	12.30	17.58	air
dichloromethane (methylene chloride)	12	176304	12.32	17.57	air
arsenic	13	90	15.08	17.03	aq biota
selenium	14	47	15.35	17.02	water
aluminum	15	1128	13.96	17.01	water
trichloroethylene	16	345110	11.09	16.63	air
formaldehyde	17	162368	10.91	16.12	air
chromium (III)*	18	8143	12.12	16.03	water
hexane (n-)	19	1965688	9.57	15.87	air
styrene	20	1645378	9.63	15.85	air
methyl ethyl ketone (MEK)	21	905039	9.70	15.66	air
acetaldehyde	22	50187	10.96	15.66	air
benzene	23	24746	11.16	15.56	air
ammonia	24	1319634	9.39	15.51	air
acrylic acid	25	3735	11.74	15.32	air
butadiene (1,3-)	26	666	12.35	15.18	air
methyl isobutyl ketone (MIBK)	27	257513	9.76	15.18	air
propylene oxide	28	750	12.19	15.07	air
xylenes	29	1966571	8.77	15.06	air
hydrogen chloride	30	436199	9.40	15.04	air
chlorine dioxide	31	19103	10.71	15.00	air
toluene	32	1945287	8.64	14.93	air
diethylhexylphthalate (2-)	33	256	12.42	14.82	water
dimethylamine	34	2470	11.20	14.59	air
chlorine	35	21765	10.22	14.56	air
dioxane (1,4-)	36	725	11.35	14.21	water
ethylbenzene	37	167076	8.95	14.17	air
ethoxyethanol (2-, = "cellosolve")	38	23477	9.44	13.81	air
ethylene oxide	39	136	11.67	13.80	air
allyl chloride	40	198	11.47	13.77	air
methanol	41	1641172	7.50	13.72	water
phenol	42	91030	8.45	13.41	water
n-butyl alcohol	43	702800	7.50	13.35	water
tert-butyl alcohol	44	7500	9.30	13.18	air
cyclohexane	45	93691	7.94	12.91	air
vinyl acetate	46	11942	8.79	12.87	air
ethyl acrylate	47	3700	9.18	12.75	water
dimethylformamide (n,n-)	48	9977	8.74	12.74	air

## AIR TOXICS INDEXING SYSTEM

naphthalene	49	14667	8.48	12.65	water
aluminum oxide	50	255	10.16	12.57	air
sulfuric acid	51	268124	7.10	12.52	air
ethylene glycol	52	31326	7.26	11.75	water
carbon disulfide	53	1	11.39	11.39	air
methyl acrylate	54	3162	7.21	10.71	water
maleic anhydride	55	477	7.63	10.31	water
dimethyl phthalate	56	309	7.67	10.16	water
triethylamine	57	2	9.82	10.12	air
phthalic anhydride	58	663	6.03	8.85	terr flora
methyl methacrylate	59	32187	3.79	8.30	water
biphenyl (diphenyl)	60	1259	3.97	7.07	aq biota
anthracene	61	41	4.05	5.66	water
chromium (total)*	62	8143	0.00	3.91	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 inco-ordination 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, ethanalamines; and other derivatives; and organic synthesis.  
**Hazard**: Severe irritant, toxic and carcinogenic compound; inhalation can cause severe irritation to eyes, respiration tract and skin; delayed symptoms may be nausea, vomiting, headache, dyspnea, pulmonary edema, weakness and drowsiness.

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

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

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

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

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

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

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

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

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

**Hydrochloric Acid**: Used in metal cleaning and pickling, food processing and general cleaners.

Hazard: Very corrosive, toxic by ingestion or inhalation ; can irritate mouth, nose and throat.

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

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

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

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

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

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

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

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

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

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

**Maleic Anhydride**: Used for coating automobile bodies; making other chemicals and detergents. **Hazard**: can cause severe 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 affect 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, preservative of wood and wood products. **Hazard**: are headache, dizziness, sweating, nausea, vomiting, dyspnea, chest pain, weakness, fever, collapse, convulsions and heart failure.

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

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

**Phosphoric Acid**: Used in fertilizers and detergents; rustproofing and pickling metals; as a catalyst and an analytical reagent. **Hazard**: irritants to skin and mucous membranes ; vapors can cause irritation to throat and coughing.

**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 1998 (including Toxic Chemical Categories)

Specific EPCRA Section 313 chemicals with CAS Numbers are listed in alphabetical starting on page II-3. A list of the same chemicals in CAS Number order begins at the end of the alphabetical list of EPCRA Section 313 chemicals. Covered chemical categories follow.

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

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

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

<u>Chemical</u>	<u>CAS Number</u>	<u>Qualifier</u>
Isopropyl alcohol (manufacturing - strong acid process, no supplier notification)	67-63-0	<u>Only</u> if it is being manufactured by the Strong acid process.
Saccharin (manufacturing, no supplier notification)	81-07-2	<u>Only</u> if it is being manufactured.

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

[Note: Chemicals may be added to or deleted from the list. The Emergency Planning and Community Right-to-Know Information Hotline, (800) 535-0202, (800) 424-9346 or (703) 412-9877, will provide up-to-date information on the status of these changes. See section B.4.b of the instructions for more information on the *de minimis* values listed below.]

## Chemical Qualifiers

This table contains the list of individual EPCRA Section 313 chemicals and categories of chemicals subject to 1998 calendar year reporting. Some of the EPCRA Section 313 chemicals listed have parenthetical qualifiers listed next to them. An EPCRA Section 313 chemical that is listed without a qualifier is subject to reporting in all forms in which it is manufactured, processed, and otherwise used.

**Fume or dust.** Three of the metals on the list (aluminum, vanadium, 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. A fume is 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 to the section 313 EPCRA Section 313 chemical list contain a qualifier relating to manufacture. For isopropyl alcohol, the qualifier is "manufacturing – strong acid process." For saccharin, the qualifier simply is "manufacturing." For isopropyl alcohol, the qualifier means that only facilities manufacturing isopropyl alcohol by the strong acid process are required to report. In the case of

saccharin, only manufacturers of the EPCRA Section 313 chemical are subject to the reporting requirements. A facility that processes or otherwise uses either EPCRA Section 313 chemical would not be required to report for those EPCRA Section 313 chemicals. In both cases, supplier notification does not apply because only manufacturers, not users, of the EPCRA Section 313 chemical must report.

**Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing).** The qualifier for ammonia means that anhydrous forms of ammonia are 100 percent reportable and aqueous forms are limited to 10 percent of total aqueous ammonia. Therefore when determining threshold and releases and other waste management quantities all anhydrous ammonia is included but only 10 percent 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 this chemical that are reportable are aerosols. 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.

## a. Alphabetical List of TRI Chemicals

CAS Number	Chemical Name	De Minimis Concentration
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.)-]	1.0
28057-48-9	d-trans-Allethrin [d-trans-Chrysanthemic acid of d-allethron]	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
33089-61-1	Amitraz	1.0
61-82-5	Amitrole	0.1

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

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
133-90-4	Chloramben	1.0	5598-13-0	Chlorpyrifos methyl	1.0
57-74-9	[Benzoic acid, 3-amino-2,5-dichloro-] Chlordane	0.1	64902-72-3	[O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate] Chlorsulfuron	1.0
115-28-6	[4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro- 2,3,3a,4,7,7a-hexahydro-] Chlorendic acid	0.1	7440-47-3	[2-Chloro-N-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]benzenesulfonamide]	1.0
90982-32-4	Chlorimuron ethyl	1.0	4680-78-8	Chromium	1.0
7782-50-5	[Ethyl-2-[[[(4-chloro-6-methoxyprimidin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate]	1.0	6459-94-5	C.I. Acid Green 3	1.0
10049-04-4	Chlorine	1.0	569-64-2	C.I. Acid Red 114	0.1
79-11-8	Chlorine dioxide	1.0	989-38-8	C.I. Basic Green 4	1.0
532-27-4	Chloroacetic acid	1.0	1937-37-7	C.I. Basic Red 1	1.0
4080-31-3	2-Chloroacetophenone	1.0	2602-46-2	C.I. Direct Black 38	0.1
106-47-8	1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride	1.0	28407-37-6	C.I. Direct Blue 6	0.1
108-90-7	p-Chloroaniline	0.1	16071-86-6	C.I. Direct Blue 218	1.0
510-15-6	Chlorobenzene	1.0	2832-40-8	C.I. Direct Brown 95	0.1
75-68-3	Chlorobenzilate	1.0	3761-53-3	C.I. Disperse Yellow 3	1.0
75-45-6	[Benzeneacetic acid, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester]	1.0	81-88-9	C.I. Food Red 5	0.1
75-00-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	1.0	3118-97-6	C.I. Food Red 15	1.0
67-66-3	Chlorodifluoromethane (HCFC-22)	1.0	97-56-3	C.I. Solvent Orange 7	1.0
74-87-3	Chloroethane (Ethyl chloride)	1.0	842-07-9	C.I. Solvent Yellow 3	1.0
107-30-2	Chloroform	0.1	492-80-8	C.I. Solvent Yellow 14	1.0
563-47-3	Chloromethane (Methyl chloride)	1.0	128-66-5	C.I. Solvent Yellow 34 (Auramine)	0.1
104-12-1	Chloromethyl methyl ether	0.1	7440-48-4	C.I. Vat Yellow 4	1.0
76-06-2	3-Chloro-2-methyl-1-propene	0.1	7440-50-8	Cobalt	0.1
126-99-8	p-Chlorophenyl isocyanate	1.0	8001-58-9	Copper	1.0
542-76-7	Chloropicrin	1.0	120-71-8	Creosote	0.1
63938-10-3	Chloroprene	1.0	108-39-4	p-Cresidine	0.1
354-25-6	3-Chloropropionitrile	1.0	95-48-7	m-Cresol	1.0
2837-89-0	Chlorotetrafluoroethane	1.0	106-44-5	o-Cresol	1.0
1897-45-6	1-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	1.0	1319-77-3	p-Cresol	1.0
95-69-2	2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	1.0	4170-30-3	Cresol (mixed isomers)	1.0
75-88-7	Chloroethalonil	1.0	98-82-8	Crotonaldehyde	1.0
75-72-9	[1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-]	1.0	80-15-9	Cumene	1.0
460-35-5	p-Chloro-o-toluidine	0.1	80-15-9	Cumene hydroperoxide	1.0
	2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	1.0	135-20-6	Cupferron	0.1
	Chlorotrifluoromethane (CFC-13)	1.0	21725-46-2	[Benzeneamine, N-hydroxy-N-nitroso, ammonium salt]	
	3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	1.0	1134-23-2	Cyanazine	1.0
			110-82-7	Cycloate	1.0
			108-93-0	Cyclohexane	1.0
			68359-37-5	Cyclohexanol	1.0
				Cyfluthrin	1.0
				[3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl) methyl ester]	

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
68085-85-8	Cyhalothrin	1.0	91-94-1	3,3'-Dichlorobenzidine	0.1
	[3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylic acid cyano(3-phenoxyphenyl) methyl ester]		612-83-9	3,3'-Dichlorobenzidine dihydrochloride	0.1
94-75-7	2,4-D	0.1	64969-34-2	3,3'-Dichlorobenzidine sulfate	0.1
	[Acetic acid, (2,4-dichlorophenoxy)-]		75-27-4	Dichlorobromomethane	1.0
533-74-4	Dazomet	1.0	764-41-0	1,4-Dichloro-2-butene	1.0
	(Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione)		110-57-6	trans-1,4-Dichloro-2-butene	1.0
53404-60-7	Dazomet, sodium salt	1.0	1649-08-7	1,2-Dichloro-1,1-difluoroethane (HCFC-132b)	1.0
	[Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium]		75-71-8	Dichlorodifluoromethane (CFC-12)	1.0
94-82-6	2,4-DB	1.0	107-06-2	1,2-Dichloroethane (Ethylene dichloride)	0.1
1929-73-3	2,4-D butoxyethyl ester	0.1	540-59-0	1,2-Dichloroethylene	1.0
94-80-4	2,4-D butyl ester	0.1	1717-00-6	1,1-Dichloro-1-fluoroethane (HCFC-141b)	1.0
2971-38-2	2,4-D chlorocrotyl ester	0.1	75-43-4	Dichlorofluoromethane (HCFC-21)	1.0
1163-19-5	Decabromodiphenyl oxide	1.0	75-09-2	Dichloromethane (Methylene chloride)	0.1
13684-56-5	Desmedipham	1.0	127564-92-5	Dichloropentafluoropropane	1.0
1928-43-4	2,4-D 2-ethylhexyl ester	0.1	13474-88-9	1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC-225cc)	1.0
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester	0.1	111512-56-2	1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb)	1.0
2303-16-4	Diallate	1.0	422-44-6	1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb)	1.0
	[Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester]		431-86-7	1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da)	1.0
615-05-4	2,4-Diaminoanisole	0.1	507-55-1	1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	1.0
39156-41-7	2,4-Diaminoanisole sulfate	0.1	136013-79-1	1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea)	1.0
101-80-4	4,4'-Diaminodiphenyl ether	0.1	128903-21-9	2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa)	1.0
95-80-7	2,4-Diaminotoluene	0.1	22-48-0	2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba)	1.0
25376-45-8	Diaminotoluene (mixed isomers)	0.1	422-56-0	3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	1.0
333-41-5	Diazinon	1.0	97-23-4	Dichlorophene	1.0
334-88-3	Diazomethane	1.0		[2,2'-Methylenebis(4-chlorophenol)]	
132-64-9	Dibenzofuran	1.0	120-83-2	2,4-Dichlorophenol	1.0
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.1	78-87-5	1,2-Dichloropropane	1.0
106-93-4	1,2-Dibromoethane (Ethylene dibromide)	0.1	10061-02-6	trans-1,3-Dichloropropene	0.1
124-73-2	Dibromotetrafluoroethane (Halon 2402)	1.0	78-88-6	2,3-Dichloropropene	1.0
84-74-2	Dibutyl phthalate	1.0	542-75-6	1,3-Dichloropropylene	0.1
1918-00-9	Dicamba	1.0	76-14-2	Dichlorotetrafluoroethane (CFC-114)	1.0
99-30-9	Dichloran	1.0		Dichlorotrifluoroethane	1.0
	[2,6-Dichloro-4-nitroaniline]		34077-87-7	Dichloro-1,1,2-trifluoroethane	1.0
95-50-1	1,2-Dichlorobenzene	1.0	90454-18-5	1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	1.0
541-73-1	1,3-Dichlorobenzene	1.0	812-04-4		
106-46-7	1,4-Dichlorobenzene	0.1			
25321-22-6	Dichlorobenzene (mixed isomers)	0.1			

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
354-23-4	1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	1.0	105-67-9	2,4-Dimethylphenol	1.0
306-83-2	2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	1.0	131-11-3	Dimethyl phthalate	1.0
62-73-7	Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester]	0.1	77-78-1	Dimethyl sulfate	0.1
51338-27-3	Diclofop methyl [2-[4-(2,4-Dichlorophenoxy)phenoxy]propanoic acid, methyl ester]	1.0	99-65-0	m-Dinitrobenzene	1.0
115-32-2	Dicofol [Benzenemethanol, 4-chloro-.alpha.-4-(chlorophenyl)-.alpha.-(trichloromethyl)-]	1.0	528-29-0	o-Dinitrobenzene	1.0
77-73-6	Dicyclopentadiene	1.0	100-25-4	p-Dinitrobenzene	1.0
1464-53-5	Diepoxybutane	0.1	88-85-7	Dinitrobutyl phenol (Dinoseb)	1.0
111-42-2	Diethanolamine	1.0	534-52-1	4,6-Dinitro-o-cresol	1.0
38727-55-8	Diethylamine	1.0	51-28-5	2,4-Dinitrophenol	1.0
117-81-7	Di(2-ethylhexyl) phthalate (DEHP)	0.1	121-14-2	2,4-Dinitrotoluene	0.1
64-67-5	Diethyl sulfate	0.1	606-20-2	2,6-Dinitrotoluene	0.1
35367-38-5	Diflubenzuron	1.0	25321-14-6	Dinitrotoluene (mixed isomers)	1.0
101-90-6	Diglycidyl resorcinol ether	0.1	39300-45-3	Dinocap	1.0
94-58-6	Dihydrosafrole	0.1	123-91-1	1,4-Dioxane	0.1
55290-64-7	Dimethipin [2,3-Dihydro-5,6-dimethyl-1,4-dithiin-1,1,4,4-tetraoxide]	1.0	957-51-7	Diphenamid	1.0
60-51-5	Dimethoate	1.0	122-39-4	Diphenylamine	1.0
119-90-4	3,3'-Dimethoxybenzidine dihydrochloride)	0.1	122-66-7	1,2-Diphenylhydrazine (Hydrazobenzene)	0.1
20325-40-0	3,3'-Dimethoxybenzidine dihydrochloride(o-Dianisidine hydrochloride)	0.1	2164-07-0	Dipotassium endothall [7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid, dipotassium salt]	1.0
111984-09-9	3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine hydrochloride)	0.1	136-45-8	Dipropyl isocinchomeronate	1.0
124-40-3	Dimethylamine	1.0	138-93-2	Disodium cyanodithioimidocarbonate	1.0
2300-66-5	Dimethylamine dicamba	1.0	94-11-1	2,4-D isopropyl ester	0.1
60-11-7	4-Dimethylaminoazobenzene	0.1	541-53-7	2,4-Dithiobiuret	1.0
121-69-7	N,N-Dimethylaniline	1.0	330-54-1	Diuron	1.0
119-93-7	3,3'-Dimethylbenzidine (o-Tolidine)	0.1	2439-10-3	Dodine [Dodecylguanidine monoacetate]	1.0
612-82-8	3,3'-Dimethylbenzidine dihydrochloride (o-Tolidine dihydrochloride)	0.1	120-36-5	2,4-DP	0.1
41766-75-0	3,3'-Dimethylbenzidine dihydrofluoride (o-Tolidine dihydrofluoride)	0.1	1320-18-9	2,4-D propylene glycol butyl ether ester	0.1
79-44-7	Dimethylcarbaryl chloride	0.1	2702-72-9	2,4-D sodium salt	0.1
2524-03-0	Dimethyl chlorothiophosphate	1.0	106-89-8	Epichlorohydrin	0.1
68-12-2	N,N-Dimethylformamide	0.1	13194-48-4	Ethoprop [Phosphorodithioic acid O-ethyl S,S-dipropyl ester]	1.0
57-14-7	1,1-Dimethylhydrazine	0.1	110-80-5	2-Ethoxyethanol	1.0
			140-88-5	Ethyl acrylate	0.1
			100-41-4	Ethylbenzene	1.0
			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

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
60168-88-9	Fenarimol [.alpha.-(2-Chlorophenyl)-.alpha.-(4-chlorophenyl)-5-pyrimidine-methanol]	1.0	76-13-1	Freon 113 [Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-]	1.0
13356-08-6	Fenbutatin oxide (Hexakis(2-methyl-2-phenylpropyl)distannoxane)	1.0	76-44-8	Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methano-1H-indene]	0.1
66441-23-4	Fenoxaprop ethyl [2-(4-((6-Chloro-2-benzoxazolylen)-oxy)phenoxy)propanoic acid, ethyl ester]	1.0	118-74-1	Hexachlorobenzene	0.1
72490-01-8	Fenoxycarb [[2-(4-Phenoxyphenoxy)ethyl]carbamic acid ethyl ester]	1.0	87-68-3	Hexachloro-1,3-butadiene	1.0
39515-41-8	Fenpropathrin [2,2,3,3-Tetramethylcyclopropane carboxylic acid cyano(3-phenoxyphenyl)methyl ester]	1.0	319-84-6	alpha-Hexachlorocyclohexane	1.0
55-38-9	Fenthion [O,O-Dimethyl O-[3-methyl-4-(methylthio)phenyl] ester, phosphorothioic acid]	1.0	77-47-4	Hexachlorocyclopentadiene	1.0
51630-58-1	Fenvalerate [4-Chloro-alpha-(1-methylethyl)benzeneacetic acid cyano(3-phenoxyphenyl)methyl ester]	1.0	67-72-1	Hexachloroethane	1.0
14484-64-1	Ferbam [Tris(dimethylcarbomodithioato-S,S')iron]	1.0	1335-87-1	Hexachloronaphthalene	1.0
69806-50-4	Fluazifop butyl [2-[4-[[5-(Trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid, butyl ester]	1.0	70-30-4	Hexachlorophene	1.0
2164-17-2	Fluometuron [Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-]	1.0	680-31-9	Hexamethylphosphoramide	0.1
7782-41-4	Fluorine	1.0	110-54-3	n-Hexane	1.0
51-21-8	Fluorouracil (5-Fluorouracil)	1.0	51235-04-2	Hexazinone	1.0
69409-94-5	Fluvalinate [N-[2-Chloro-4-(trifluoromethyl)phenyl]-DL-valine(+)-cyano(3-phenoxyphenyl)-methyl ester]	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
133-07-3	Folpet	1.0	302-01-2	Hydrazine	0.1
72178-02-0	Fomesafen [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N-methylsulfonyl-2-nitrobenzamide]	1.0	10034-93-2	Hydrazine sulfate	0.1
50-00-0	Formaldehyde	0.1	7647-01-0	Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	1.0
64-18-6	Formic acid	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	1.0
			25311-71-1	Isafenphos[2-[[Ethoxyl]((1-methylethyl)amino)-phosphinothioyl]oxy] benzoic acid 1-methylethyl ester]	1.0
			67-63-0	Isopropyl alcohol (manufacturing-strong acid process, no supplier notification)	1.0
			80-05-7	4,4'-Isopropylidenediphenol	1.0
			120-58-1	Isosafrole	1.0

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
77501-63-4	Lactofen [Benzoic acid, 5-[2-Chloro-4-(trifluoromethyl)phenoxy]-2-nitro-,2-ethoxy-1-methyl-2-oxoethyl ester]	1.0	60-34-4	Methyl hydrazine	1.0
7439-92-1	Lead	0.1	74-88-4	Methyl iodide	1.0
58-89-9	Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1.alpha.,2.alpha.,3.beta., 4.alpha., 5.alpha., 6.beta.)-]	0.1	108-10-1	Methyl isobutyl ketone	1.0
330-55-2	Linuron	1.0	624-83-9	Methyl isocyanate	1.0
554-13-2	Lithium carbonate	1.0	556-61-6	Methyl isothiocyanate	1.0
121-75-5	Malathion	1.0		[Isothiocyanatomethane]	
108-31-6	Maleic anhydride	1.0	75-86-5	2-Methyl lactonitrile	1.0
109-77-3	Malononitrile	1.0	80-62-6	Methyl methacrylate	1.0
12427-38-2	Maneb [Carbamodithioic acid, 1,2-ethanediyldis-, manganese complex]	1.0	924-42-5	N-Methylolacrylamide	1.0
7439-96-5	Manganese	1.0	298-00-0	Methyl parathion	1.0
93-65-2	Mecoprop	0.1	109-06-8	2-Methylpyridine	1.0
149-30-4	2-Mercaptobenzothiazole (MBT)	1.0	872-50-4	N-Methyl-2-pyrrolidone	1.0
7439-97-6	Mercury	1.0	9006-42-2	Metiram	1.0
150-50-5	Merphos	1.0	21087-64-9	Metribuzin	1.0
126-98-7	Methacrylonitrile	1.0	7786-34-7	Mevinphos	1.0
137-42-8	Metham sodium (Sodium methyl dithiocarbamate)	1.0	90-94-8	Michler's ketone	0.1
67-56-1	Methanol	1.0	2212-67-1	Molinate (1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester)	1.0
20354-26-1	Methazole [2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione]	1.0		Molybdenum trioxide	1.0
2032-65-7	Methiocarb	1.0	1313-27-5	Monochloropentafluoroethane (CFC-115)	1.0
94-74-6	Methoxone ((4-Chloro-2-methylphenoxy)acetic acid) (MCPA)	0.1	76-15-3	Monuron	1.0
3653-48-3	Methoxone sodium salt ((4-Chloro-2-methylphenoxy)acetate sodium salt)	0.1	150-68-5	Mustard gas [Ethane, 1,1'-thiobis[2-chloro-]]	0.1
72-43-5	Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-]]	1.0	505-60-2	Myclobutanil [.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile]	1.0
109-86-4	2-Methoxyethanol	1.0	88671-89-0	Nabam	1.0
96-33-3	Methyl acrylate	1.0	142-59-6	Naled	1.0
1634-04-4	Methyl tert-butyl ether	1.0	300-76-5	Naphthalene	1.0
79-22-1	Methyl chlorocarbonate	1.0	91-20-3	alpha-Naphthylamine	0.1
101-14-4	4,4'-Methylenebis(2-chloroaniline) (MBOCA)	0.1	134-32-7	beta-Naphthylamine	0.1
101-61-1	4,4'-Methylenebis(N,N-dimethyl)benzenamine	0.1	91-59-8	Nickel	0.1
74-95-3	Methylene bromide	1.0	7440-02-0	Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine)	1.0
101-77-9	4,4'-Methylenedianiline	0.1	1929-82-4	Nitric acid	1.0
78-93-3	Methyl ethyl ketone	1.0	7697-37-2	Nitrilotriacetic acid	0.1
			139-13-9	p-Nitroaniline	1.0
			100-01-6	5-Nitro-o-anisidine	1.0
			99-59-2	Nitrobenzene	0.1
			98-95-3	4-Nitrobiphenyl	0.1
			92-93-3	Nitrofen [Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-]	0.1
			1836-75-5	Nitrogen mustard [2-Chloro-N-(2-chloroethyl)-N-methylethanamine]	0.1
			51-75-2	Nitroglycerin	1.0

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
88-75-5	2-Nitrophenol	1.0	52645-53-1	Permethrin	1.0
100-02-7	4-Nitrophenol	1.0		[3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, (3-phenoxyphenyl) methyl ester]	
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	85-01-8	Phenanthrene	1.0
86-30-6	N-Nitrosodiphenylamine	1.0	108-95-2	Phenol	1.0
156-10-5	p-Nitrosodiphenylamine	1.0	26002-80-2	Phenothrin	1.0
621-64-7	N-Nitrosodi-n-propylamine	0.1		[2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester]	
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	95-54-5	1,2-Phenylenediamine	1.0
59-89-2	N-Nitrosomorpholine	0.1	108-45-2	1,3-Phenylenediamine	1.0
16543-55-8	N-Nitrosornicotine	0.1	106-50-3	p-Phenylenediamine	1.0
100-75-4	N-Nitrosopiperidine	0.1	615-28-1	1,2-Phenylenediamine dihydrochloride	1.0
99-55-8	5-Nitro-o-toluidine	1.0			
27314-13-2	Norflurazon	1.0	624-18-0	1,4-Phenylenediamine dihydrochloride	1.0
	[4-Chloro-5-(methylamino)-2-[3-(trifluoromethyl)phenyl]-3(2H)-pyridazinone]		90-43-7	2-Phenylphenol	1.0
2234-13-1	Octachloronaphthalene	1.0	57-41-0	Phenytoin	0.1
19044-88-3	Oryzalin	1.0	75-44-5	Phosgene	1.0
	[4-(Dipropylamino)-3,5-dinitrobenzene sulfonamide]		7803-51-2	Phosphine	1.0
20816-12-0	Osmium tetroxide	1.0	7664-38-2	Phosphoric acid	1.0
301-12-2	Oxydemeton methyl	1.0	7723-14-0	Phosphorus (yellow or white)	1.0
	[S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid]		85-44-9	Phthalic anhydride	1.0
19666-30-9	Oxydiazon	1.0	1918-02-1	Picloram	1.0
	[3-[2,4-Dichloro-5-(1-methylethoxy)phenyl]-5-(1,1-dimethyl ethyl)-1,3,4-oxadiazol-2(3H)-one]		88-89-1	Picric acid	1.0
42874-03-3	Oxyfluorfen	1.0	51-03-6	Piperonyl butoxide	1.0
10028-15-6	Ozone	1.0	29232-93-7	Pirimiphos methyl	1.0
123-63-7	Paraldehyde	1.0		[O-(2-(Diethylamino)-6-methyl-4-pyrimidinyl)-O,O-dimethylphosphorothioate]	
1910-42-5	Paraquat dichloride	1.0	1336-36-3	Polychlorinated biphenyls (PCBS)	0.1
56-38-2	Parathion	1.0	7758-01-2	Potassium bromate	0.1
	[Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl)ester]		128-03-0	Potassium dimethyl dithiocarbamate	1.0
1114-71-2	Pebulate	1.0	137-41-7	Potassium N-methyl dithiocarbamate	1.0
	[Butylethylcarbamothioic acid S-propyl ester]		41198-08-7	Profenofos	1.0
40487-42-1	Pendimethalin	1.0		[O-(4-Bromo-2-chlorophenyl)-O-ethyl-S-propyl phosphorothioate]	
	[N-(1-Ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine]		7287-19-6	Prometryn	1.0
76-01-7	Pentachloroethane	1.0		[N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine]	
87-86-5	Pentachlorophenol (PCP)	0.1	23950-58-5	Pronamide	1.0
57-33-0	Pentobarbital sodium	1.0	1918-16-7	Propachlor	1.0
79-21-0	Peracetic acid	1.0		[2-Chloro-N-(1-methylethyl)-N-phenylacetamide]	
594-42-3	Perchloromethyl mercaptan	1.0	1120-71-4	Propane sultone	0.1

\*C.I. means "Color Index"

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
709-98-8	Propanil	1.0	62-74-8	Sodium fluoroacetate	1.0
	[N-(3,4-Dichlorophenyl)-propanamide]		7632-00-0	Sodium nitrite	1.0
2312-35-8	Propargite	1.0	131-52-2	Sodium pentachlorophenate	1.0
107-19-7	Propargyl alcohol	1.0	132-27-4	Sodium o-phenylphenoxide	0.1
31218-83-4	Propetamphos	1.0	100-42-5	Styrene	0.1
	[3-[(Ethylamino)methoxyphosphinothioyl]oxy]-2-butenic acid, 1-methylethyl ester]		96-09-3	Styrene oxide	0.1
60207-90-1	Propiconazole	1.0	7664-93-9	Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	1.0
	[1-[2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]-methyl-1H-1,2,4-triazole]		2699-79-8	Sulfuryl fluoride (Vikane)	1.0
57-57-8	beta-Propiolactone	0.1	35400-43-2	Sulprofos [O-Ethyl O-[4-(methylthio)phenyl]phosphorodithioic acid S-propylester]	1.0
123-38-6	Propionaldehyde	1.0	34014-18-1	Tebuthiuron	1.0
114-26-1	Propoxur	1.0		[N-[5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2-yl]-N,N'-dimethylurea]	
	{Phenol, 2-(1-methylethoxy)-, methylcarbamate]		3383-96-8	Temephos	1.0
115-07-1	Propylene (Propene)	1.0	5902-51-2	Terbacil	1.0
75-55-8	Propyleneimine	0.1		[5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione]	
75-56-9	Propylene oxide	0.1	630-20-6	1,1,1,2-Tetrachloroethane	1.0
110-86-1	Pyridine	1.0	79-34-5	1,1,2,2-Tetrachloroethane	1.0
91-22-5	Quinoline	1.0	127-18-4	Tetrachloroethylene (Perchloroethylene)	0.1
106-51-4	Quinone	1.0	354-11-0	1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a)	1.0
82-68-8	Quintozene (Pentachloronitrobenzene)	1.0	354-14-3	1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121)	1.0
76578-14-8	Quizalofop-ethyl	1.0	961-11-5	Tetrachlorvinphos [Phosphoric acid, 2-chloro-1-(2,4,5-trichlorophenyl) ethenyl dimethyl ester]	1.0
	[2-[4-[(6-Chloro-2-quinoxalinyloxy)phenoxy]propanoic acid ethyl ester]		64-75-5	Tetracycline hydrochloride	1.0
10453-86-8	Resmethrin	1.0	7696-12-0	Tetramethrin	1.0
	[[5-(Phenylmethyl)-3-furanyl]-methyl-2,2-dimethyl-3-(2-methyl-1-propenyl) cyclopropane carboxylate]			[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]	
81-07-2	Saccharin (manufacturing, no supplier notification)	0.1	7440-28-0	Thallium	1.0
94-59-7	Safrole	0.1	148-79-8	Thiabendazole	1.0
7782-49-2	Selenium	1.0		[2-(4-Thiazolyl)-1H-benzimidazole]	
74051-80-2	Sethoxydim	1.0	62-55-5	Thioacetamide	0.1
	[2-[1-(Ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxyl-2-cyclohexen-1-one]		28249-77-6	Thiobencarb	1.0
7440-22-4	Silver	1.0		[Carbamic acid, diethylthio-, S-(p-chlorobenzyl)ester]	
122-34-9	Simazine	1.0	139-65-1	4,4'-Thiodianiline	0.1
26628-22-8	Sodium azide	1.0	59669-26-0	Thiodicarb	1.0
1982-69-0	Sodium dicamba	1.0			
	[3,6-Dichloro-2-methoxybenzoic acid, sodium salt]				
128-04-1	Sodium dimethyldithiocarbamate	1.0			

CAS Number	Chemical Name	De Minimis Concentration	CAS Number	Chemical Name	De Minimis Concentration
23564-06-9	Thiophanate ethyl	1.0	79-00-5	1,1,2-Trichloroethane	1.0
	[[1,2-Phenylenebis-(iminocarbonothioyl)]biscarbamic acid diethylester]		79-01-6	Trichloroethylene	0.1
23564-05-8	Thiophanate methyl	1.0	75-69-4	Trichlorofluoromethane (CFC-11)	1.0
79-19-6	Thiosemicarbazide	1.0	95-95-4	2,4,5-Trichlorophenol	1.0
62-56-6	Thiourea	0.1	88-06-2	2,4,6-Trichlorophenol	0.1
137-26-8	Thiram	1.0	96-18-4	1,2,3-Trichloropropane	0.1
1314-20-1	Thorium dioxide	1.0	57213-69-1	Triclopyr triethylammonium salt	1.0
7550-45-0	Titanium tetrachloride	1.0	121-44-8	Triethylamine	1.0
108-88-3	Toluene	1.0	1582-09-8	Trifluralin	1.0
584-84-9	Toluene-2,4-diisocyanate	0.1		[Benzeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-]	
91-08-7	Toluene-2,6-diisocyanate	0.1	26644-46-2	Triforine	1.0
26471-62-5	Toluene diisocyanate (mixed isomers)	0.1		[N,N'-[1,4-Piperazinediylbis-(2,2,2-trichloroethylidene)]bisformamide]	
95-53-4	o-Toluidine	0.1	95-63-6	1,2,4-Trimethylbenzene	1.0
636-21-5	o-Toluidine hydrochloride	0.1	2655-15-4	2,3,5-Trimethylphenyl methylcarbamate	1.0
8001-35-2	Toxaphene	0.1	639-58-7	Triphenyltin chloride	1.0
43121-43-3	Triadimefon	1.0	76-87-9	Triphenyltin hydroxide	1.0
	[1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone]		126-72-7	Tris(2,3-dibromopropyl) phosphate	0.1
2303-17-5	Triallate	1.0	72-57-1	Trypan blue	0.1
68-76-8	Triaziquone	1.0	51-79-6	Urethane (Ethyl carbamate)	0.1
	[2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-]		7440-62-2	Vanadium (fume or dust)	1.0
101200-48-0	Tribenuron methyl	1.0	50471-44-8	Vinclozolin	1.0
	[2-[[[[[4-Methoxy-6-methyl-1,3,5-triazin-2-yl)-methylamino]-carbonyl]amino]sulfonyl] benzoic acid-methyl ester)		108-05-4	[3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolinedione]	
1983-10-4	Tributyltin fluoride	1.0	593-60-2	Vinyl acetate	0.1
2155-70-6	Tributyltin methacrylate	1.0	75-01-4	Vinyl bromide	0.1
78-48-8	S,S,S-Tributyltrithio-phosphate (DEF)	1.0	75-35-4	Vinyl chloride	0.1
52-68-6	Trichlorfon	1.0	108-38-3	Vinylidene chloride	1.0
	[Phosphoric acid,(2,2,2-trichloro-1-hydroxy-ethyl)-,dimethyl ester]		95-47-6	m-Xylene	1.0
76-02-8	Trichloroacetyl chloride	1.0	106-42-3	o-Xylene	1.0
120-82-1	1,2,4-Trichlorobenzene	1.0	1330-20-7	p-Xylene	1.0
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)	1.0	87-62-7	Xylene (mixed isomers)	1.0
			7440-66-6	2,6-Xylidine	0.1
			1222-67-7	Zinc (fume or dust)	1.0
				Zineb	1.0
				[Carbamodithioic acid, 1,2-ethanediyibis-,zinc complex]	

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

EPCRA Section 313 chemical categories are subject to the 1 percent *de minimis* concentration unless the substance involved meets the definition of an OSHA carcinogen in which case the 0.1 percent *de minimis* concentration applies. The *de minimis* concentration for each category is provided in parentheses.

**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)**

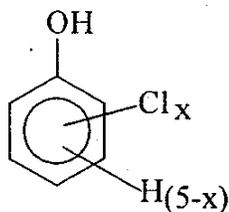
*Includes any unique chemical substance that contains barium as part of that chemical's infrastructure. This category does not include: Barium sulfate CAS Number 7727-43-7*

**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 (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.*

**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<sup>+</sup> or any other group where a formal dissociation may occur. For example KCN or Ca(CN)<sub>2</sub>.*

**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-Methylene bis(4-isocyanatocyclohexane)
101-68-8	Methylene bis(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
16938-22-0yl	2,2,4-Trimethylhexamethene diisocyanate
15646-96-5	2,4,4-Trimethylhexamethylene diisocyanate

**N171 Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) (1.0)** *Includes any unique chemical substance that contains an EBDC or an EBDC salt as part of that chemical's infrastructure.*

**N230 Certain Glycol Ethers (1.0)**

$R-(OCH_2CH_2)_n-OR'$   
 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.

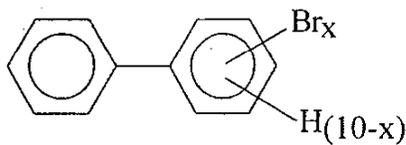
**N420 Lead Compounds (inorganic compounds: 0.1; organic compounds 1.0)** *Includes any unique chemical substance that contains lead as part of that chemical's infrastructure.*

**N450 Manganese Compounds (1.0)** *Includes any unique chemical substance that contains manganese as part of that chemical's infrastructure.*

- N458 Mercury Compounds (1.0)**  
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)**

205-82-3 Benzo(j)fluoranthene  
207-08-9 Benzo(k)fluoranthene  
189-55-9 Benzo(rst)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  
3697-24-3 5-Methylchrysene  
5522-43-0 1-Nitropyrene

- N575 Polybrominated Biphenyls (PBBs) (0.1)**



Where  $x = 1$  to  $10$

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

$C_xH_{2x-2}Cl_y$   
where  $x = 10$  to  $13$ ;  
 $y = 3$  to  $12$ ; and  
the average chlorine content ranges from 40 - 70% with the limiting molecular formulas  $C_{10}H_{18}Cl_3$  and  $C_{13}H_{22}Cl_{12}$

- N590 Polycyclic aromatic compounds (PACs) (0.1 except for benzo(a)phenanthrene and dibenzo(a,e)fluoranthene which are subject to the 1.0 percent *de minimis*)**  
This category includes only those chemicals listed below.

56-55-3 Benz(a)anthracene  
205-99-2 Benzo(b)fluoranthene

- 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.

- 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 Emergency Response Commission:

**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:** Emergency Response Commission 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.

**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.

**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.