



WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

Washington State Toxics Release Inventory

Summary Report: 1996

Washington State Department of Ecology
Hazardous Waste and Toxics Reduction Program
June, 1998
Publication #98-402



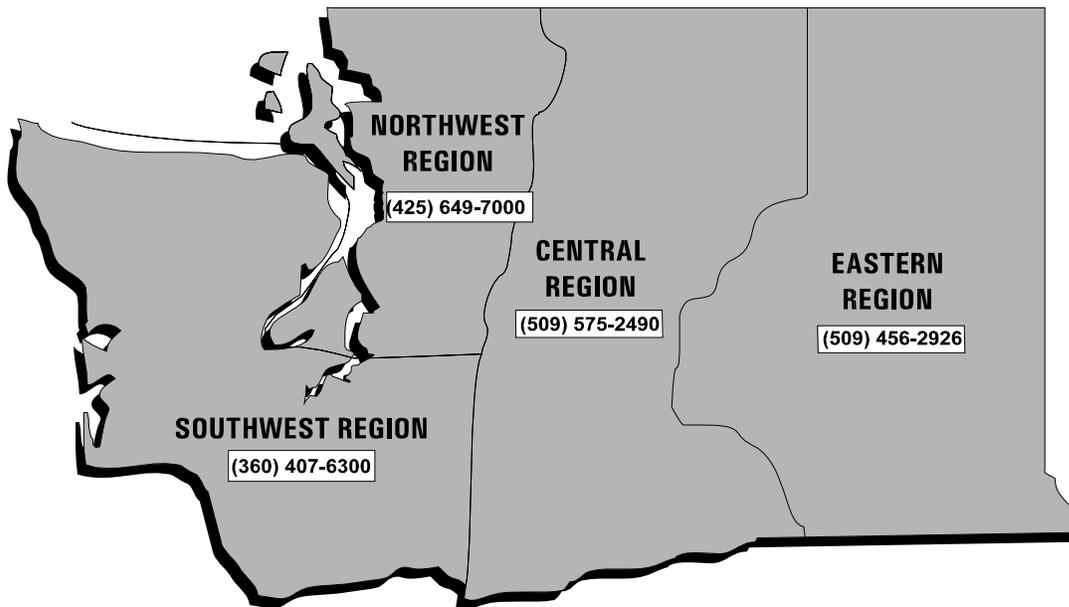
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For More Information

For additional information about the chemicals reported under the Emergency Planning and Community Right-to-Know Act (EPCRA) contact Ecology's Hazardous Substance Information Office at 800-633-7585 or EPA's EPCRA hotline at 800-535-0202.

More information about the Toxics Release Inventory Data is available both from Ecology and EPA at the above numbers. The national TRI database is available through the National Library of Medicine, 301-496-6531 and on the internet. Complete national and state data is also distributed to more than 1400 Governmental Printing Offices and Federal Depository Libraries. In addition, about 3000 county or municipal libraries are designated by each state librarian to hold TRI data for public use.

Executive Summary

This report summarizes the Toxics Release Inventory (TRI) reports submitted to the United States Environmental Protection Agency (EPA) and to Washington State under the Emergency Planning and Community Right-to-Know Act of 1986. The reports identify total chemical releases and transfers during calendar year 1996 for over 600 chemicals or chemical categories identified by Congress as “toxic.”

Tables in the report identify releases of chemicals to air, water and land. They also catalogue transfers of chemicals through pipes or sewers to publicly owned treatment works or other geographically or physically separate off-site treatment facilities.

It is important to understand the following limitations when using TRI information:

- ✓ Only annual total pounds are reported. Information regarding rate of release or concentration is not included.
- ✓ The amounts reported may be based on engineering calculations or estimates rather than direct monitoring of releases.
- ✓ Many facilities releasing or transferring toxic chemicals are not required to submit a TRI report.
- ✓ The TRI does not include toxics introduced into the environment from sources other than industrial facilities, such as pesticide applications, motor vehicles and wood stoves.
- ✓ The toxicity of chemicals listed in the TRI varies dramatically.
- ✓ The TRI does not attempt to detail the risk from individual chemicals or facilities.
- ✓ A release of a TRI toxic chemical usually does not indicate a violation of federal, state or local environmental laws.

The reporting of toxic releases does not necessarily mean that the chemicals released cause toxic effects. Listed TRI chemicals include substances that can cause toxic effects at certain levels and under certain conditions. Local, state, and federal programs work with industry pollution prevention efforts to protect workers, communities and the environment from these toxic chemicals.

The Department of Ecology (Ecology) uses TRI data as one of several environmental indicators for the state. The data also serve as a valuable tool for monitoring the progress of pollution prevention efforts and for measuring the effectiveness of pollution prevention programs underway in Washington. Under a grant from EPA, Ecology has developed the Toxics Release Inventory Display System (TRIDS), a graphic display model for the TRI data. This display program will be available on Ecology’s website in 1998 (<http://www.wa.gov/ecology>).

Statewide Summary of TRI Data, 1996

For 1996, 276 facilities filed one or more Toxics Release Inventory (TRI) reports in Washington State. The releases of toxic chemicals reported for 1996 totaled 26.1 million pounds.

Releases to environmental media included:

- ✓ air, 23.4 million pounds (89.8 percent of total),
- ✓ water, 2.5 million pounds (9.7 percent of total), and
- ✓ land, 141,194 pounds (about one-half percent).

The release/disposal total or sum of releases and off-site transfers for disposal for Washington State was 28.4 million pounds. The state ranked 28 nationally for release/disposal total.

Three industry categories contributed the largest share of chemical releases (75 percent):

- ✘ Paper and allied products manufacturing, 13 million pounds — about 50 percent of all releases;
- ✘ Primary metal products industries, 4.7 million pounds — 18 percent of all releases; and
- ✘ Transportation equipment manufacturing, 2.0 million pounds — 8 percent of all releases.
- ✘ Chemicals and allied products manufacturing and fabricated metal industries were the fourth and fifth highest categories.
- ✘ Federal facilities in the state accounted for a small part of total releases. Three federal facilities in Washington State reporting under President's Executive Order 12856 accounted for about 33,000 pounds.

Largest Contributors

The twenty manufacturing facilities that reported the largest quantities of TRI releases accounted for 75 percent of all chemical releases reported in the state. Three of the four facilities with the highest amounts of releases were in the paper and allied products manufacturing sector:

Weyerhaeuser Incorporated, Longview — 4.5 million pounds;
Camas Mill, James River Corporation — 1.6 million pounds;
Kaiser Mead Works, Mead. — 1.3 million pounds;
Rayonier, Incorporated, Port Angeles — 1.3 million pounds.

These top 4 facilities for releases were also ranked one through four for release/disposal totals.

Facilities Reporting Increases and Decreases from 1995

Weyerhaeuser Incorporated, Longview, reported the greatest decrease in chemical releases: 1.24 million pounds. Seven other companies reported decreases of more than 100,000 pounds.

Kaiser Mead Works, in Mead, reported the greatest increase in releases: 786,005 pounds. Six other facilities reported increases of more than 100,000 pounds.

Top Chemicals

Methanol was the chemical with the highest amount of reported releases in 1996. The 7.0 million pounds of methanol reported was a decrease from 1995, reversing a trend of reported increases.

Carbonyl sulfide, ammonia, hydrogen fluoride and hydrochloric acid, respectively, were the second through fifth highest chemicals reported.

New Chemicals

Thirteen of the 286 new chemicals added to the list in 1995 were reported by Washington State facilities for 1996. They totaled 1.4 million pounds.

Carcinogens

Releases of EPA listed cancer causing chemicals decreased in Washington State from 1995 to 1996 by 900,000 pounds. Releases of known and probable carcinogens were 3.6 million pounds in 1996.

Targeted Chemicals (33/50 Program)

Releases of chemicals targeted for reduction by EPA in a voluntary program for pollution prevention, the "33/50 Program," continued to decrease. In Washington, these 17 chemicals have decreased by 60 percent since 1988.

Largest Releases by County

The top two counties by total release were:

Cowlitz 6.0 million pounds; and
Clark 2.8 million pounds;

Summary of Transfers

Off-site transfers to publicly owned treatment works (sewers) and other off-site totaled 18.4 million pounds in 1996.

Publicly Owned Treatment Works

In 1996, manufacturers reported transferring 1.7 million pounds of chemicals to publicly owned treatment works. This amount includes 1.5 million pounds of nitrate compounds, one of the new reportable chemical categories.

Other Off-Site Transfers

Other off-site transfers include quantities destined for treatment, disposal, energy recovery or recycling. About 16.7 million pounds were reported as these other off-site transfers 1996. This included 12.7 million pounds to recycling, 888,000 pound to energy recovery, 790,000 pounds to treatment and 2.3 million pounds to disposal.

Alternate Threshold/Certification Form Reporting

Thirty-five facilities used the two-page certification form to report that they had a total annual reportable amount of releases, transfers, recycling, energy recovery and treatment of 500 pounds or less. Since 1995, this new form has been provided to ease the burden of reporting for facilities with low volumes of reportable waste.

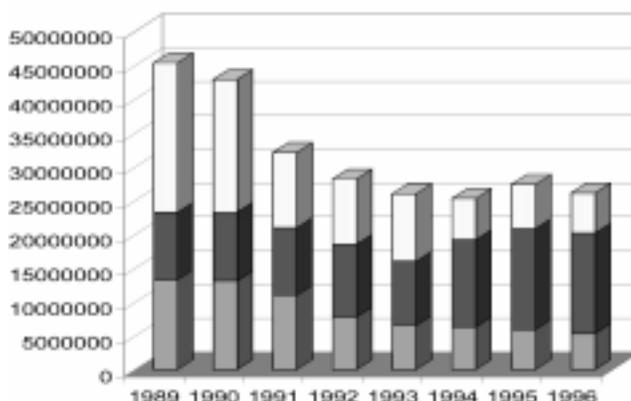
TRI Development

Proposals for changes to TRI reporting (which are currently under review by EPA) include:

- ✓ A proposal by EPA to add dioxin and persistent bioaccumulators to the list of TRI chemicals and to lower reporting thresholds for these chemicals;
- ✓ A petition to EPA to add air transportation as a reportable industry category under TRI;
- ✓ A study by EPA to streamline reporting under TRI and improve the quality of right-to-know information;
- ✓ A proposal to expand the program to include information on chemical use or materials accounting.

□ All Chemicals
■ Normalized Chemicals**
▨ Target Chemicals*

* 33/50 Program Chemicals
** Adjusted for Changes in Reporting Requirements



Washington TRI Releases, 1989 - 1996
(in pounds)

Changes in TRI Releases, 1989 – 1996

Trends in TRI releases in Washington State over time include:

Releases of TRI chemicals decreased from 1995 to 1996 by 4.5%.

Releases of chemicals that have been targeted for reduction by EPA have decreased over 60 percent since 1988.

Releases of the group of chemicals normalized for changes in reporting requirements decreased 13.2% since 1989.

Releases of all chemicals reported has decreased by 42.5% since 1989.

Introduction

Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA) into federal law on October 17, 1986. EPCRA helps communities deal safely and effectively with hazardous chemicals. The law includes a number of requirements for businesses and government. It is also intended to improve emergency planning for hazardous chemicals at the local level. The EPCRA has a number of provisions, but its primary objectives are to:

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

The Toxics Release Inventory (TRI) reporting helps meet the first two objectives.

Toxics Release Inventory (TRI)

What is the Toxics Release Inventory (TRI)?

The TRI is the annual summary that tracks the amounts of toxic chemicals released into the air, land and water by certain manufacturing facilities. Over 600 chemical compounds and/or chemical categories listed under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) are reported under the TRI. The Emergency Planning and Community Right-to-Know Act, also known as SARA Title III, came into law with the Superfund Amendments and Reauthorization Act (SARA) of 1986. These laws have required facilities to file reports annually since 1987. The Pollution Prevention Act of 1990 expanded the TRI.

Who Must Report?

Manufacturing facilities that operate under Standard Industrial Classification Codes 20-39, have 10 or more full-time employees, and meet certain activity thresholds for chemical use must comply with TRI reporting requirements. Currently, thresholds for chemical use stand at 25,000 pounds for each listed chemical that is manufactured or processed, and

10,000 pounds for each listed chemical otherwise used by the facility in the reporting year (Appendix 5). Facilities file a separate five page full Form R or two page abbreviated Form A report for each TRI-listed chemical that they manufactured, processed, or otherwise used in their operation, if the quantity exceeds threshold limits.

Federal facilities must report under Executive Order 12856 if they meet the employee and use criteria.

Facilities that had total annual reportable amounts of 500 pounds or less of releases, transfers, recycling, energy recovery and treatment of listed chemicals can use the abbreviated new form or Form A. Reporting year 1995 was the first year that this form was available. This alternate threshold for reporting applies if a facility's use of the chemical was less than one million pounds. The purpose of this form is to reduce the burden of reporting for facilities producing small quantities of waste.

When and Where are the TRI reports filed?

TRI reports are filed every year to the EPA and the Department of Ecology. Form R reports submitted by facilities are due on July 1 for the preceding calendar year. For 1996 reporting, the due date for filing was extended by EPA to September 1, 1997. After completing data entry and data quality checks, EPA and Ecology compile a TRI database. Each agency publishes an annual summary report. EPA reports from a national perspective, while Ecology focuses on Washington State.

How is TRI Data Used?

TRI information can be used in a variety of ways. This data is provided through national and state databases and publications. The TRI information can help the public identify potential concerns in their communities. This data is important to the news media, as well as to those with academic or research interests. It provides an avenue for the public to work with industry to reduce hazards associated with toxic chemicals. TRI data also works as a tool to help measure progress in reducing toxic chemical use and releases.

Industry can use the data to identify problem areas, establish reduction targets, reduce costs associated with the purchase and disposal of toxic chemicals, and monitor progress toward pollution prevention goals.

Federal, state, and local governments can use the data to compare facilities or geographic areas, to evaluate existing environmental programs, or to target technical assistance efforts. Washington State uses TRI data to evaluate economic and social factors as they affect the environment. For example, A Study on Environmental Equity in Washington State, publication #95-413, was published in October 1995. The TRI data is also used as one of a number of environmental indicators used in Washington State to determine the status of our environmental efforts (Washington's Environmental Health, 1997, Ecology Publication 97-702).

Under a grant from EPA, Ecology has developed the Toxic Release Inventory Display System (TRIDS), a graphic display tool for the TRI data. This TRIDS program and instructions for its use will be available on Ecology's website by the end of 1998 (<http://www.wa.gov/ecology>).

Congress and state legislatures have directed pollution prevention legislation toward facilities reporting under the TRI. At the federal level, the Pollution Prevention Act of 1990 expanded the reporting requirements to include recycling, treatment, and energy recovery, both on and off-site. In addition, the law requires facilities to document source reduction methods.

In 1990, the Washington State Legislature passed a law establishing state policies and goals for pollution prevention. The Hazardous Waste Reduction Act encourages the reduction of hazardous substance use and hazardous waste generation. The law requires certain hazardous waste generators and hazardous substance users (defined as TRI reporters) to prepare plans for voluntary reduction of hazardous substance use and waste generation. Many facilities use the TRI list of chemicals as a starting point for identifying source reduction opportunities. The state pollution prevention planning requirements apply to all TRI reporters and facilities that generate more than 2,640 pounds (1,000 kilograms) of regulated hazardous waste per year. These facilities pay a hazardous waste planning fee based upon the pounds of TRI chemicals released and hazardous wastes generated. Ecology uses the revenue generated from the fee to provide technical assistance to businesses. Each year, Ecology provides a summary report to state legislators describing the progress made toward pollution prevention goals. The most recent summary report, Reducing Hazardous Wastes and Substances in Washington, publication 98-401, covers the year 1996.

What are the Limitations of TRI Data?

The Changing TRI Databases

Facilities must file their TRI Reports with both EPA and their respective state. In some cases, one agency and not the other may receive reports. Facilities that report under the TRI may file revised Form Rs if they discover or decide that a previously submitted form needs correction. While Ecology has made every effort to process all forms filed, the state data may differ from EPA's because of differences in the submittals and revisions. These revisions also may change state release values for a previous year. For example, if a revision for 1995 increased one facility's releases by 500,000 pounds, that would show as an increase in the state's total for 1995 as well.

Under the TRI regulations, facilities may report data based upon estimates and calculations rather than actual, measured pounds of toxic chemicals. Therefore, the information collected may reflect only general trends. Facilities may submit voluntary revisions of the report forms for any prior year. Sometimes the standards and methods for estimating releases change. Thus, the TRI data is somewhat variable and can change after this report is published. However, the revisions and changes will result in a more accurate database over time.

Each year, the list of chemicals reportable under the TRI can change, reflecting additions, deletions or modifications made by EPA. Table 1 shows the changes in the TRI reporting requirements over time. In the 1993 through 1995 reporting years, there were major changes to the list, including the addition of 286 chemicals. For 1996 reporting, there have been relatively few changes to the chemical list. For this reason, 1996 data can be compared directly with 1995 data. The process of trying to ensure that the year-to-year comparisons do not include changes that cause inconsistencies is called "normalization". In order to compare 1996 data with years prior to 1995, it is necessary to normalize the data. In order to make such comparisons and to compare 1996 and 1995 data with prior years' data, it was necessary to remove from the yearly totals:

- ✘ all chemicals added since 1988;
- ✘ all chemicals deleted from the list for all years; and
- ✘ hydrochloric acid, sulfuric acid, and ammonia.

These problems of reconciling the year-to-year comparisons limit their use in this report. Where year-to-year comparisons are made, they are either for the adjusted or normalized chemicals, or for a single chemical or group of chemicals.

Table I. Changes to Toxic Release Inventory Reporting Requirements 1987 - 1996.

<u>YEAR</u>	<u>INDUSTRY CATEGORIES</u>	<u>CHEMICALS</u>	<u>OTHER</u>
1987	Manufacturing	List of 308 chemicals. Deleted: Titanium oxide.	Manufacture/process threshold 75,000 lbs.
1988	Manufacturing	Deleted: C I acid blue #9, diammonium salt; CI acid blue #9, disodium salt; melamine crystal; sodium sulfate (solution)	Manufacture/process threshold 50,000 lbs.
1989	Manufacturing	Deleted: Sodium hydroxide (solution). Modified: Aluminum oxide (only fibrous forms).	Manufacture/process threshold 25,000 lbs.
1990	Manufacturing	Added: Allyl alcohol; creosote; 2,3-dichloropropene; dinitrobenzene; dinitrotoluene; isosafrole; toluene diisocyanate. Deleted: Terephthalic acid ; C I green 7 & 36; C I blue 15	
1991	Manufacturing	Added: 7 CFC'S and halons.	Pollution Prevention data elements added
1993	Manufacturing	Deleted: Barium sulfate from barium compounds, Di-N-octyl phthalate.	
1994	Manufacturing Federal Facilities	Added: 11 HCFCs and 21 chemicals and 2 chemical categories. Deleted: Acetone, copper monochloro-phthalocyanine pigment, butyl benzyl phthalate. Modified: Ammonia, Sulfuric acid, glycol ethers.	
1995	Manufacturing Federal Facilities	Added: 286 chemicals/chemical categories. Deferred addition: 41 chemicals. Modified: Hydrochloric acid. Deleted: DEP, DEHA.	Alternate threshold
Proposed /Future	Proposed additions: metal mining, coal mining, electric utilities, commercial hazardous waste treatment, chemicals and allied products - wholesale, petroleum bulk stations-wholesale, and solvent recovery services	There are many petitions for changes to the chemical list. There have been legal challenges to the chemical list additions.	Advanced notice of rulemaking for materials accounting (chemical use)

The TRI in Perspective

The TRI is most useful when seen as one of several indicators of environmental performance. Toxic chemicals are generated from many sources, including manufacturing and non-manufacturing processes, agricultural chemical use, use and disposal of consumer products, transportation, indoor and outdoor burning, and other sources. The TRI reporting requirements cover only one sector, manufacturing. Other businesses and organizations, as well as individuals, use may also contribute substantial amounts of toxic chemicals to the environment.

A recent Department of Ecology publication looked at many indicators of environmental progress. Washington's Environmental Health—96, Publication #97-702 addressed the question, "Is the health of our environment getting better, staying the same or getting worse?" The TRI factored as one of those indicators. Air quality counted as another significant indicator of environmental health. Figure 1 shows the sources of air pollution in Washington State. Industrial sources, including the TRI, contributed only 14 percent of the state's air pollutants. About 89 percent of TRI releases are to the air. Other major sources of air pollution include motor vehicles, outdoor burning, and wood-stoves and fireplaces.

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. Manufacturing facilities operate under environmental regulatory permits. TRI information includes data on releases and transfers of certain chemicals. It does not indicate the rate or concentration of chemicals released, nor can it demonstrate the geographic boundaries of the chemical release. Therefore, exposures or risks to the public cannot be determined by using TRI data alone.

The EPA continues to develop tools that will aid communities in using the TRI information in risk screening efforts. EPA is working to establish numeric, relative ranking values based on reported TRI releases and transfers and to provide tools that will use weighting factors to make relative hazard rankings. These factors represent toxicity, exposure characteristics and potentially impacted populations based upon EPA models and databases. These risk screening and ranking efforts will help answer the complex and difficult questions of what the TRI releases mean in terms of risk and exposure. In spite of these limitations, the TRI data continues to be useful for addressing potential risks to a community when evaluated together with other information.

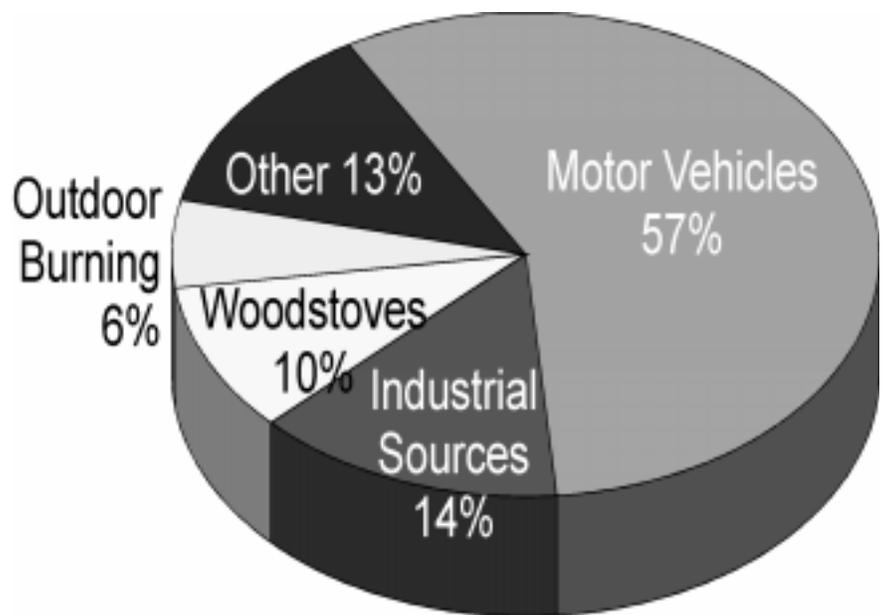


Figure 1
Air Pollution in Washington State

TRI Developments

1. Industry Expansion

A major criticism of the TRI has been that it includes only the manufacturing industries. While federal facilities were added to the list in 1993 by presidential proclamation, EPA has addressed the issue of including other industry categories. After completing the rule-making process, EPA has provided industry guidance and training for the newly added industries.

Beginning with reporting year 1998, the following industry categories will be required to report under the TRI (if they meet use and employee thresholds):

- Metal and coal mining (SIC Codes 10 & 12);
- Electric generating plants (only combust-ing coal and/or oil-SIC 4911, 4931 & 4939);
- Hazardous waste & treatment firms (SIC code 4953);
- Chemical wholesale distributors (SIC code 5169);
- Wholesale bulk petroleum distributors (SIC code 5171); and
- Solvent recyclers (SIC code 7389).

Additionally, on February 10, 1998, EPA published a Federal Register notice advising of the receipt of a petition from the Natural Resources Defense Council, Defenders of Wildlife, National Audubon Society and the Humane Society of the United States request-ing the addition of industries in SIC Code 45, transportation by air, to facilities reporting under TRI. The federal register notice requested comments on the petition.

2. Chemical Use

Currently, only the states of New Jersey and Massachusetts already have “chemical use” or materials accounting programs in place. The analysis of these programs has been an integral part of the studies at EPA. EPA is exploring many options regarding the uses, benefits and concerns about materials ac-

counting. An advanced notice of proposed rulemaking has been published. This an-nounced EPA’s intent to develop a proposed rule to increase the information available to the public on chemical use under the TRI. By “chemical use,” EPA means the amounts of chemical entering a facility, amounts trans-formed into products and wastes, and result-ing amounts leaving the facility-site. EPA may also consider use-related data elements. This discussion on addition of materials accounting continues.

Dioxins and Persistent Bioaccumulators

EPA has proposed to add the chemical dioxin and other persistent bioaccumulators to its TRI list of chemicals. Addition of these chemicals would also require lowering of the use threshold for reporting, because levels of production of these chemicals are lower than current thresholds. Dioxin is a highly toxic compound that is known to cause adverse health effects in humans and animals in very small concentrations. Dioxin is produced in extremely small volumes by many industrial processes including incineration of waste, pulp and paper production and steel produc-tion.

Form R Redesign

The Toxic Release Data Committee under the National Advisory Council for Environmental Policy and Technology is meeting to improve the type of right-to-know information avail-able to communities and to streamline right-to-know reporting to ease the paperwork for business affected by the requirements. Among the topics for discussion are definition of release, how chemicals transferred to publicly owned treatment works are treated, and Section 8 of the Form R (waste management reporting). Additionally, a series of nine public meetings will be held to solicit public comment on these issues.

Washington State TRI Findings, 1996

Certification Form/Alternate Threshold Reporting (Form A)

For reporting years 1995 and 1996, facilities were permitted to file a Form A instead of a Form R or TRI Report if they met the following conditions for that chemical:

1. The facility met the industry category and employee requirements for reporting (Appendix 5);
2. The facility used more than the threshold (10,000 or 25,000 pounds) of a listed chemical, but used less than 1 million pounds;
3. The total annual reportable amount of the chemical waste (released, disposed of, used for energy recovery, recycled or treated, both on and off-site) was less than 500 pounds.

The result of filing this form is:

1. The facility is not classified as a Form R reporter for that chemical. If they file only certification forms for all chemicals, they would not be considered a Form R reporter at all by the Department of Ecology.
2. The facility is not subject to pollution prevention planning requirements for that chemical based upon Form R status. They may still be subject to Washington State's pollution prevention planning requirements based on hazardous waste generator status or for other chemicals.

Appendix 4 lists the facilities and chemicals reported on the certification form for 1996. Thirty-five facilities used the form for one or more chemicals. Fourteen facilities used this form for one or more chemicals but filed additional 5-page Form R reports for other chemicals. Twenty-one used this form exclusively. Other reporting facilities may have been qualified to use the certification form, but chose to file a Form R in order to get credit for their reductions in releases or because they were unaware of the two page form.

TRI Releases by Environmental Media

As of March 1998, 276 facilities in Washington State had reported under TRI reporting requirements for 1996. This is an increase of 4 from 1995. Thirty-one of these were reporting under the TRI for the first time. Of these, 255 facilities filed one or more five-page Toxic Release Inventory Reports (Form R).

For the 1996 reporting year, the facilities reported a total of 26,074,650 pounds of toxic chemicals released to air, water and land (Figure 2). Air releases comprised 89.8 percent of all releases (23,401,215 pounds). Water releases made up 9.7 percent (2,532,241 pounds) and land releases accounted for about one-half of one percent (141,194 pounds) of releases. No underground injection releases were reported.

For the 1996 reporting year, the Environmental Protection Agency (EPA) is using the sum of releases on-site and off-site transfers for disposal (release/disposal total) to rank states and facilities. This release/disposal total represents the total chemicals being disposed into the environment directly. The Washington State off-site transfers for disposal totaled 2,306,212 pounds in 1996. The sum of releases on-site and off-site transfers for disposal is 28,377,862 pounds. Using this release/disposal total, Washington State ranks 28th nationally.

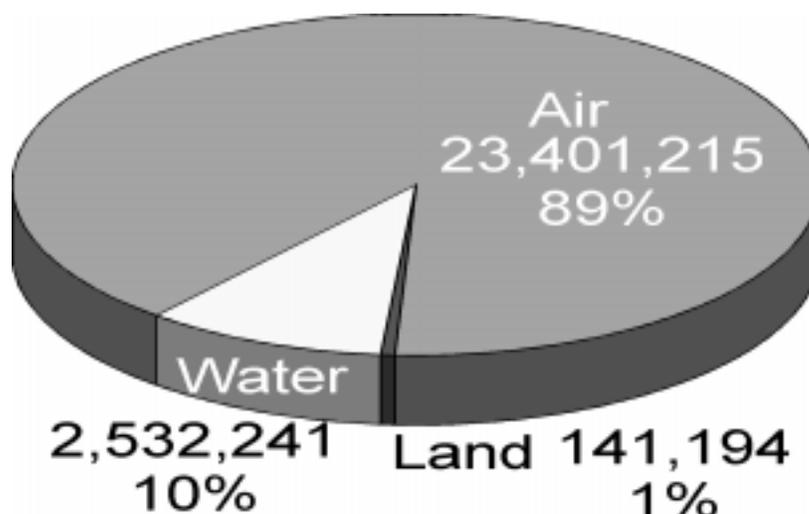


Figure 2
Washington TRI Releases by
Environmental Media, 1996
(in pounds)

TRI Releases by Industry Category

Eight of the industry categories required to report under the TRI were responsible for 96.5 percent of the releases in the state (Figure 3). The paper and allied products manufacturing class reported the largest share of releases, 13.0 million pounds. This amount comprised about 50 percent of the releases reported in the state. Primary metal industries was second with 4.7 million pounds reported (18 percent). Ranked third was transportation equipment manufacturing, 2.0 million pounds (7.7 percent). These three categories accounted for three-fourths of the state's total releases in 1996.

Other top classification groups included:

chemicals & allied products manufacturing, 1.5 million pounds (5.9 percent);
fabricated metal products, 1.3 million pounds (5.0 percent);
petroleum refining, 926,000 pounds (3.5 percent);
rubber & plastics manufacturing, 846,000 pounds (3.2 percent);
lumber and wood products, 826,000 pounds (3.1 percent).

All other classifications combined reported releases of about 900,000 pounds, about 3.5 percent of the state total.

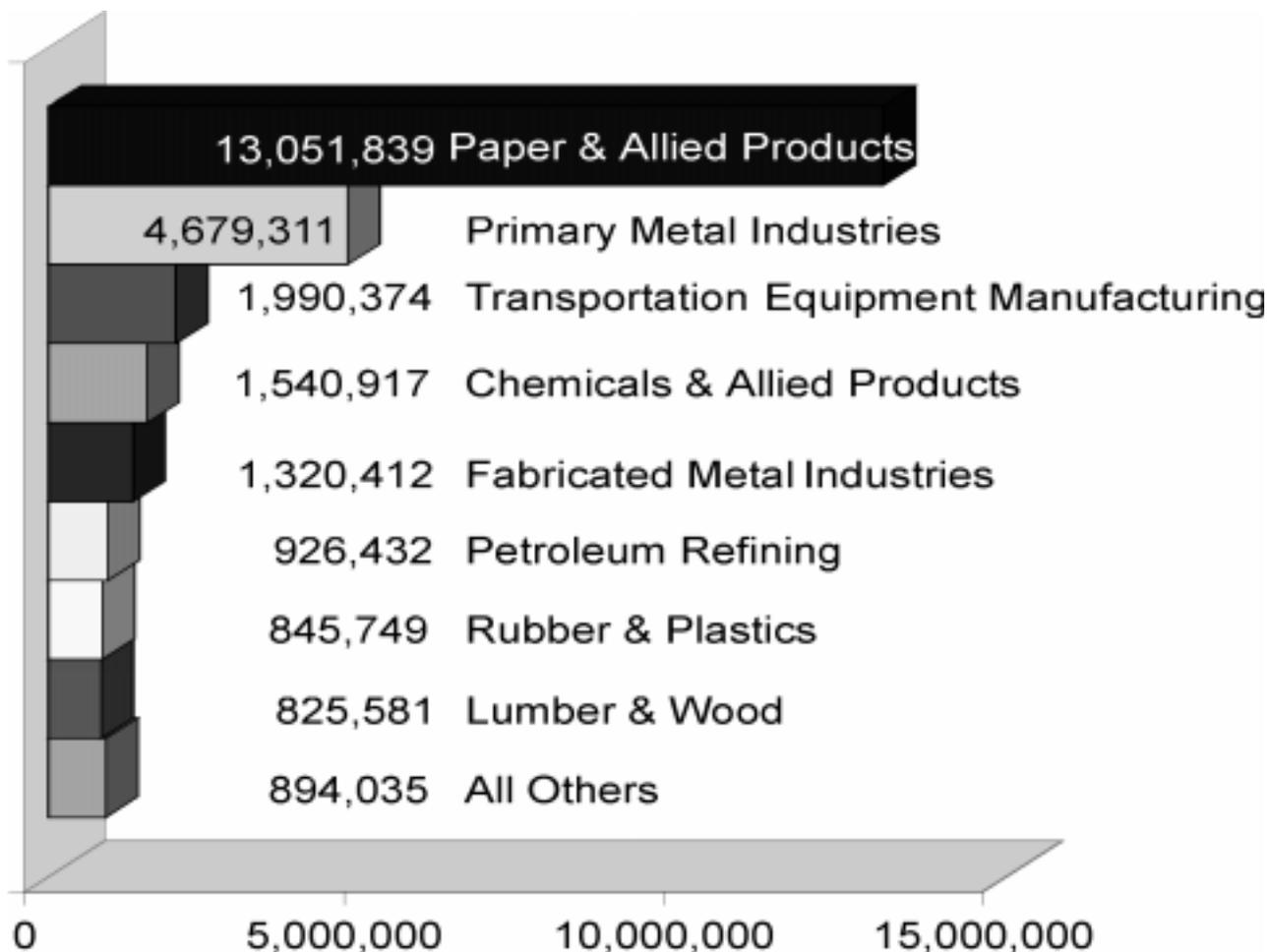


Figure 3
Top Eight Industries - Washington TRI Releases by Industry Category, 1996

Top Reporting Facilities

Releases and Release/Disposal Total

For the 1996 reporting year, the top reporting facilities were determined both for total releases on-site and for combined releases on-site and off-site transfers for disposal (described as release/disposal total). Table 2 ranks the 20 facilities with the highest releases and lists the release/disposal total for these facilities. The release/disposal total represents the total chemicals being disposed into the environment directly and is being used by the EPA for ranking for 1996.

Weyerhaeuser Incorporated, in Longview, was the facility reporting the highest release/disposal total, 4.7 million pounds. This facility is also the top reporting facility for releases, 4.5 million pounds. The top four facilities reporting for releases and the top four facilities for releases/disposal total are the same: Weyerhaeuser Incorporated, Camas Mill, Kaiser Mead Works and Rayonier, Incorporated, Port Angeles.

Three of these four facilities and ten of the top 20 reporting in both categories are in the paper and allied products manufacturing category.

The top twenty reporting facilities for releases represent 19.6 million pounds of the state's 26 million pound total. This is about 75 percent.

Facilities Showing Increases and Decreases in 1996 from 1995

The facility showing the greatest decrease from 1995 to 1996 was Weyerhaeuser Company, Longview, 1.2 million pounds. Facilities reporting decreases of more than 100,000 pounds were: Rayonier, Inc., Crown Beverage Packaging in Olympia and Walla Walla, Simpson Tacoma Kraft, Kenworth Truck Company, Port Townsend Paper, and Columbia Lighting.

The facility showing the greatest increase in total pounds from 1995 to 1996 was Kaiser Mead Works, 786,005 pounds. Facilities reporting increases of more than 100,000 pounds include Vanalco, Inc., Kaiser Aluminum- Tacoma, Georgia-Pacific West, Inc, American Millwork, Unocal Agricultural Products, and Intalco Aluminum Company.

Paper & Allied Products

With over 13 million pounds of reported releases, the paper and allied products manufacturing category accounted for about 50 percent of the releases reported in the state. Sixteen different facilities reported in this category in 1996. The amount of releases in this industry category decreased in 1996 from 1995. This reverses a trend of increases in 1994 and 1995. The increases in 1994 and 1995 were attributed to changes in accounting methods for reporting of methanol. Major chemicals reported by this industry include methanol, hydrochloric acid, and chloroform.

Primary Metal Products

The primary metal products industry was the second highest category for amounts of chemical released. The 24 facilities reporting in this category acknowledged releases of about 4.7 million pounds. This is an increase of 1.1 million pounds. The major chemicals reported by this industry were carbonyl sulfide, hydrogen fluoride and hydrochloric acid.

Transportation Equipment Manufacturing

The transportation equipment manufacturing industry reported releases of 2.0 million pounds. There were 34 facilities reporting in this category. Major chemicals reported by this industry are methyl ethyl ketone, styrene and toluene. The seven Boeing facilities reported 1.1 million pounds in 1996. This is an increase from the 900,000 pounds reported in 1995. Boeing has reduced its reported releases from a high of 5.4 million pounds in 1990. This industry, which includes aircraft manufacturing, overall has continued to reduce the amount of releases reported under TRI.

Chemicals & Allied Products

The chemical and allied products manufacturing industry was the fourth highest industry reporting releases under TRI. Releases from the 35 facilities reporting in this industry were 1.5 million pounds. This category replaced the 1995 fabricated metal products category as the fourth highest-ranking industry category. The total amount released in this category was about the same as in 1995. Major chemicals reported by this industry were ammonia, toluene, and methanol.

Federal Facilities

Reporting year 1996 was the third year that federal facilities reported under Executive Order 12856. Three facilities reported in Washington State: Bangor Naval Submarine Base, Puget Sound Naval Shipyard and Fort Lewis. These three facilities, together, reported releases of 33,611 pounds in 1996, a small part of the state's total.

Table 2
Washington TRI Top 20 Facilities, 1996 Releases to All Media (in Pounds)

Name	City	County	Air	Water	Land	Release	Release Disposal Total	95 Release	95 Release Disposal Total
WEYERHAEUSER COMPANY	LONGVIEW	COWLITZ	4,139,829	323,595	0	4,463,424	4,703,748	5,705,746	5,716,824
CAMAS MILL	CAMAS	CLARK	1,306,800	244,050	0	1,550,850	1,550,850	1,499,876	1,499,876
KAISER MEAD WORKS	MEAD	SPOKANE	1,263,755	500	250	1,264,505	1,265,886	478,500	491,755
RAYONIER INC. PORT ANGELES MIL	PORT ANGELES	CLALLAM	720,410	542,960	0	1,263,370	1,263,370	1,605,477	1,605,477
BOISE CASCADE PAPER DIVISION	WALLULA	WALLA WALLA	1,151,710	103,707	0	1,261,417	1,261,417	1,259,696	1,259,696
VANALCO INC	VANCOUVER	CLARK	1,049,255	0	0	1,049,255	1,066,605	501,465	513,465
GEORGIA-PACIFIC WEST, INC	BELLINGHAM	WHATCOM	623,757	414,883	0	1,038,640	1,040,666	812,629	815,680
UNOCAL AGRICULTURAL PRODUCTS	KENNEWICK	BENTON	835,855	18,800	103,741	964,396	1,253,924	1,036,571	1,036,571
SIMPSON TACOMA KRAFT CO.	TACOMA	PIERCE	840,889	44,106	0	884,995	884,995	1,008,591	1,008,591
BOEING COMMERCIAL AIRPLANE GROUP	EVERETT	SNOHOMISH	783,021	1,560	0	784,581	813,236	722,872	735,282
LONGVIEW FIBRE COMPANY	LONGVIEW	COWLITZ	536,525	125,425	0	661,950	661,950	659,025	659,025
ALUMINUM COMPANY OF AMERICA	MALAGA	CHELAN	660,781	0	0	660,781	681,857	580,974	584,039
KIMBERLY-CLARK TISSUE COMPANY	EVERETT	SNOHOMISH	202,230	413,550	0	615,780	616,040	558,794	558,806
WEYERHAEUSER	COSMOPOLIS	GRAYS HARBOR	558,815	4,700	0	563,515	563,515	655,460	655,460
PORT TOWNSEND PAPER CORP	PORT TOWNSEND	JEFFERSON	488,210	21,190	0	509,400	509,400	620,382	620,382
INTALCO ALUMINUM CORPORATION	FERNDALE	WHATCOM	487,207	0	0	487,207	487,207	385,418	385,418
CRAIN IND. INC. KENT DIV.	KENT	KING	387,322	0	0	387,322	387,322	386,082	386,082
KAISER ALUMINUM & CHEMICAL COR	SPOKANE	SPOKANE	371,936	117	0	372,053	372,713	460,895	461,409
KAISER ALUMINUM	TACOMA	PIERCE	305,372	17	0	305,389	307,389	77,349	79,049
CROWN BEVERAGE PACKAGING	OLYMPIA	THURSTON	289,798	0	0	289,798	290,298	436,921	437,421
SHELL ANACORTES REFINING COMPA	ANACORTES	SKAGIT	265,268	9,320	970	275,558	275,558	239,643	239,643
REYNOLDS METALS CO.	KENT	KING	261,247	0	0	261,247	261,404	263,012	263,176
REYNOLDS METALS CO.	LONGVIEW	COWLITZ	248,555	1,349	0	249,904	1,221,917	240,503	1,214,879
ARCO CHERRY POINT REFINERY	FERNDALE	WHATCOM	206,940	41,223	14	248,177	248,177	261,730	261,730
AMERICAN MILLWORK INC	KIRKLAND	KING	245,000	0	0	245,000	245,000	112,000	112,000
TOTAL - TOP 20 FACILITIES			18,230,487	2,317,052	110,975	20,658,514	22,234,444	20,569,611	21,601,736

TRI Releases by Chemical

Reporting year 1996 was the second year the expanded list of chemicals was included in the TRI. In a single year, 1995, the number of reportable chemicals increased from 350 to nearly 600. Of this list of chemicals, 102 were reported by one or more facilities in Washington State (Appendix 1). Thirteen of these are on the list of newly added chemicals.

The top ten chemicals in amount of releases cover 77 percent of all chemical releases reported in the state (Table 3). In descending order, the top 5 chemicals reported were methanol, carbonyl sulfide, ammonia, hydrogen fluoride and hydrochloric acid.

Methanol

Methanol is generated through chemical reactions and occurs naturally in the breakdown of wood fibers. The pulping process releases this chemical from the wood fibers. Methanol is a flammable solvent and is the most reported chemical for 1996. Methanol releases in 1996 were 7.0 million pounds, decreasing from a high of 8.2 million pounds in 1995. Twenty-eight facilities reported releases of methanol in 1996. Weyerhaeuser Incorporated, Longview, reported 2.9 million pounds. Other facilities reporting more than 500,000 pounds were: Camas Mill, James River Corp.; Rayonier Inc. Port Angeles; Boise Cascade, Wallula; and Simpson Tacoma Kraft.

The primary reporters of methanol operate in the paper and allied products industry category. The picture of what has happened with methanol release reporting since 1990 represents an example of how it is difficult to make year-to-year comparisons with TRI data. Some of this industry use emission factors provided by the National Council for Air and Stream Improvement to calculate releases. In 1994, new emission factors were provided to the industry. The new emission factors for 1994 resulted in the reporting of an increase in the amount of methanol released by manufacturers. Facilities have since moved to reporting based upon actual emissions monitoring.

Ideally, a facility should go back and recalculate their reported releases for previous years when new factors cause major changes in reporting. Historically, TRI databases have not been adjusted for these changes. For example, acetone was deleted from the list of reportable chemicals in 1994, but acetone releases are still included in data for 1993 and before. However, when comparing 1994 data to 1993 and prior years, the releases due to acetone must be excluded from totals. For methanol, where the reporting requirements for the chemical have remained constant but the way some releases are calculated has changed, there is no standard for addressing these variables.

Carbonyl sulfide

Carbonyl sulfide was the number two reported chemical in 1996. A total of 2.5 million pounds was reported released to the environment by the seven facilities reporting. All of these facilities are in the primary metal products industry category. Vanalco, Inc. in Vancouver reported 849,000 pounds. Kaiser Mead Works in Mead reported 518,000 pounds and Aluminum Company of America, Malaga, reported 477,000 pounds.

Carbonyl sulfide is a by-product of the aluminum manufacturing process.

Ammonia

Ammonia was the number three reported chemical in 1996. Reported releases of ammonia totaled 2.1 million pounds. In 1995, ammonia releases totaled 2.3 million pounds. Ammonia is widely used as a fertilizer and refrigerant. EPA added a qualifier to reporting of ammonia under TRI in 1994. The qualifier for ammonia means that anhydrous forms of ammonia are 100 percent reportable; but solutions of ammonia and water are limited to 10 percent of total aqueous ammonia. In past years, aqueous forms of ammonia were 100 percent reportable. For this reason, reported releases for past years (when ammonia was the number one reportable chemical in the state) are not comparable to the 1995 or 1996 values.

Ammonia was reported by 43 facilities in 1996. Unocal Agricultural Products, Kennewick, reported about 800,000 pounds of ammonia releases to the environment, almost one-half of the state total. Other facilities reporting over 100,000 pounds of ammonia releases were Rayonier, Inc. - Port Angeles Mill, and Georgia-Pacific, West, in Bellingham.

Table 3
Washington TRI Releases by Chemical, 1996
(in pounds)

CHEMICAL	AIR	LAND	WATER	Total	DISPOSAL	RELEASE/ DISPOSAL TOTAL
METHANOL	6,256,198.00	0.00	751,697.00	7,007,895.00	1,031.00	7,008,926.00
CARBONYL SULFIDE	2,490,323.00	0.00	0.00	2,490,323.00		2,490,323.00
AMMONIA	1,607,413.00	5,069.00	482,738.00	2,095,220.00	64,000.00	2,159,220.00
HYDROGEN FLUORIDE	1,710,574.00	0.00	0.00	1,710,574.00	310.00	1,710,884.00
HYDROCHLORIC ACID	1,468,611.00	0.00	0.00	1,468,611.00	77.00	1,468,688.00
METHYL ETHYL KETONE	1,169,493.00	0.00	3,854.00	1,173,347.00	255.00	1,173,602.00
TOLUENE	1,141,055.00	3,067.00	1,877.00	1,145,999.00	1,199.00	1,147,198.00
NITRATE COMPOUNDS	256.00	115,506.00	950,210.00	1,065,972.00	255.00	1,066,227.00
CHLOROFORM	914,559.00	0.00	119,589.00	1,034,148.00	10.00	1,034,158.00
XYLENE (MIXED ISOMERS)	879,900.00	151.00	166.00	880,217.00	7,872.00	888,089.00

Hydrogen fluoride

Hydrogen fluoride acid is the fourth chemical on the list of most released TRI chemicals in Washington State in 1996. Releases of this chemical increased to 1.7 million pounds from the 1.2 million pounds reported in 1995.

Twenty facilities reported releases of hydrogen fluoride for 1996. The six facilities reporting the highest amounts released are in the primary metal products category. Kaiser Mead Works reported 744,000 pounds released, about 43 percent of the total. Other top reporters were Vanalco, Inc. in Vancouver, Reynolds Metals in Longview and Aluminum Company of America, in Malaga.

Hydrochloric Acid

Hydrochloric acid was fifth on the list of most released TRI chemicals in Washington State in 1996. Many manufacturing operations use hydrochloric acid. Some plants in the pulp and paper industry emit hydrochloric acid produced during combustion of wood wastes. EPA modified reporting of hydrochloric acid for the 1995 reporting year. The qualifier for hydrochloric acid means that aerosols are the only forms of this chemical that are reportable. Acid aerosols include mists, vapors, gas, and other airborne forms of any particle size. While EPA and the state notified all the facilities that had reported for this acid in 1994 of the change, it is possible that some facilities have still reported for non-aerosol forms. Because of this change, year-to-year comparisons of hydrochloric acid reporting is unreliable.

Eighteen facilities filed Form Rs for hydrochloric acid in 1996. Eight of the ten facilities reporting the most releases of this chemical are in the paper and allied products manufacturing industry category. Boise Cascade - Wallula reported 511,000 pounds of hydrochloric acid release. Port Townsend Paper reported 260,000 pounds released while Kaiser Aluminum and Chemical in Trentwood and Georgia Pacific West Inc., in Bellingham, each reported about 160,000 pounds of releases.

Carcinogens

Releases of carcinogens (noted in Appendix 1) decreased in Washington State from 1995 to 1996. A total of 3.6 million pounds of chemicals listed as known or suspected cancer causing agents by the Occupational Safety and Health Administration were reported in 1996. The top chemicals, in order, were chloroform, styrene, acetaldehyde and dichloromethane. This represents a decrease from 4.4 million pounds in 1995 and 7.1 million pounds in 1988.

Targeted Chemicals (33/50 Program)

Facilities reported a total of 5.3 million pounds of releases of chemicals targeted for reduction under the voluntary 33/50 Program. This EPA sponsored program targeted 17 chemicals (noted in Appendix 1) for voluntary reduction by industry. These chemicals were targeted because they both posed a concern for public health and the environment, and were high volume industrial chemicals that had the potential for reduction through pollution prevention. EPA concluded the 33/50 Program in 1995 having reached its goal of a 50 percent reduction in release volume nationally. Washington State achieved a 57 percent reduction by 1995 reporting year compared to 1988 release totals. With the continued decrease in release amounts, the state has achieved over a 60 percent reduction in the reported releases of these chemicals.

New Chemicals

Of the 286 new chemicals or chemical categories added to the TRI beginning with reporting year 1995, thirteen were reported in Washington State in 1996. Many of the newly added chemicals are active ingredient pesticides. Over 1.4 million pounds of the newly listed chemicals were reported released to the air, land and water in 1996, an increase from 1.2 million pounds in 1995. The chemical with the highest amount of releases was the nitrate compounds category with 1.1 million pounds. The nitrate compounds category included only compounds that dissolve in water solution and they are reportable only when present in a solution. The second-highest reported chemical was n-hexane, 274,000 pounds.

TRI Releases by County¹

Twenty-six of Washington's thirty-nine counties had facilities that reported TRI releases (Figure 4). Franklin and Douglas Counties each had a reporting facility, but no reported releases. Reporters in five counties (Cowlitz, King, Clark, Spokane and Whatcom) acknowledged releases that totaled over 2 million pounds per county. Five other counties (Snohomish, Pierce, Walla Walla, Clallam and Benton) each totaled between one and two million pounds released per county. Four counties (Chelan, Grays Harbor, Thurston and Jefferson) each reported release totals of more than 500,000 pounds but less than 1 million pounds. The releases in these fourteen counties accounted for 96.4 percent of all TRI releases statewide.

Cowlitz County reported the largest amount of chemicals released in the state in 1996. The 6.0 million pounds accounted for 23 percent of the state total. Weyerhaeuser Incorporated, Longview accounted for 4.6 million pounds of the county's releases.

Clark County ranked second with 2.8 million pounds, followed by King County with 2.5 million pounds.

The TRI information is collected and analyzed according to political boundaries such as states and counties. Of course, natural earth processes cross over such artificial boundaries. Surface water movement and weather patterns affect the impact chemical releases have on the soil, water and air. The way the winds blow and waters flow will influence the impact of chemicals on the environment independent of political boundaries.

Still, looking at releases by area and population helps establish points of reference and gives a starting point to better characterize the impact of these releases. The points of reference cannot, however, be used to directly assess exposure and environmental risk. The question of determining the risk associated with a chemical release is a complex process that falls far beyond the scope of this report. Some relative risk-based rankings of TRI chemicals have been developed. A tool to make such computations may be available for general use in 1998. However, to determine the risk of a particular chemical in a specific situation requires a process called risk assessment. The EPA has developed tools to help communities deal with local environmental problems including chemical risk assessments. These tools are available by contacting EPA in person, over the telephone or on their website (www.epa.gov).

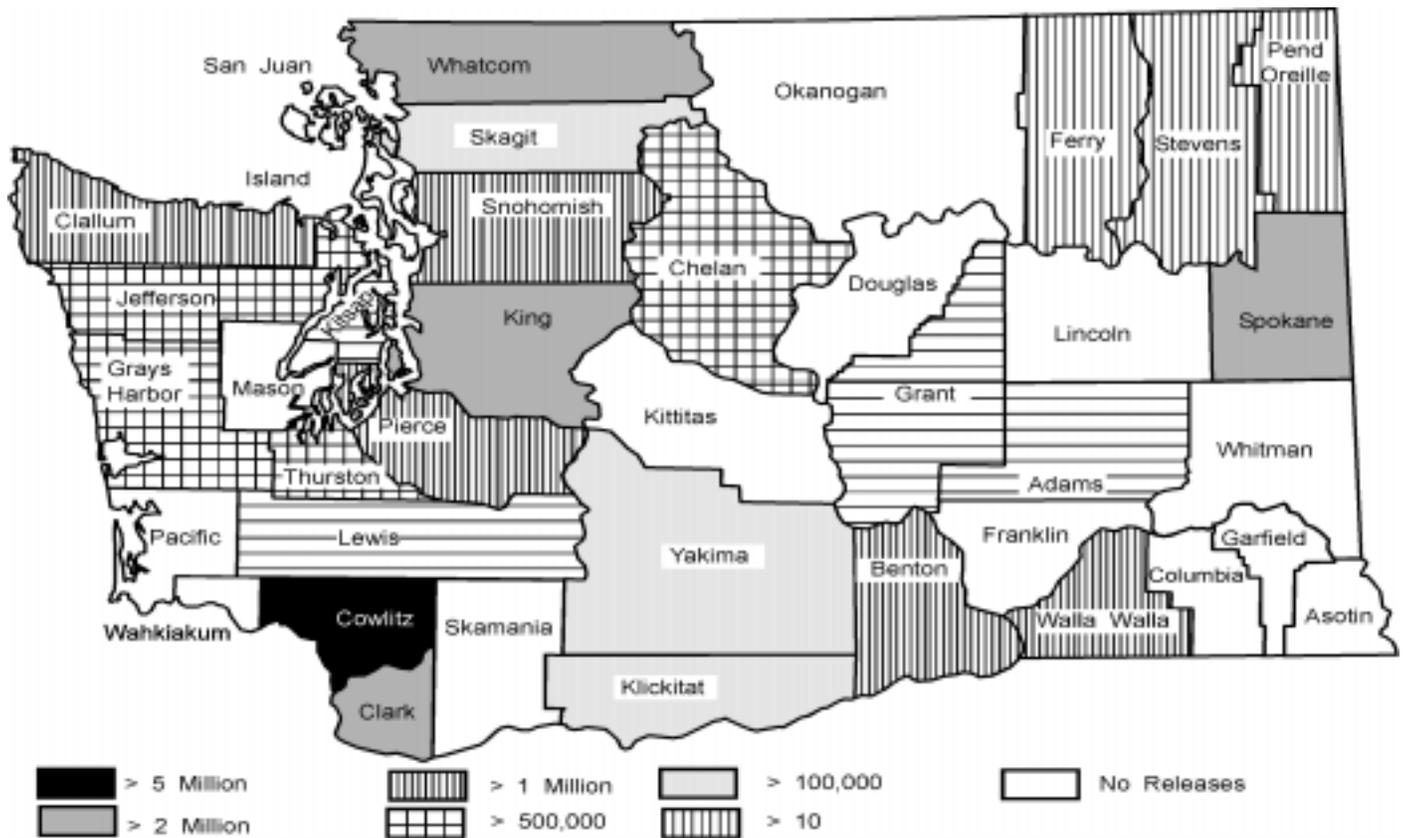


Figure 4
Washington TRI Release by County, 1996

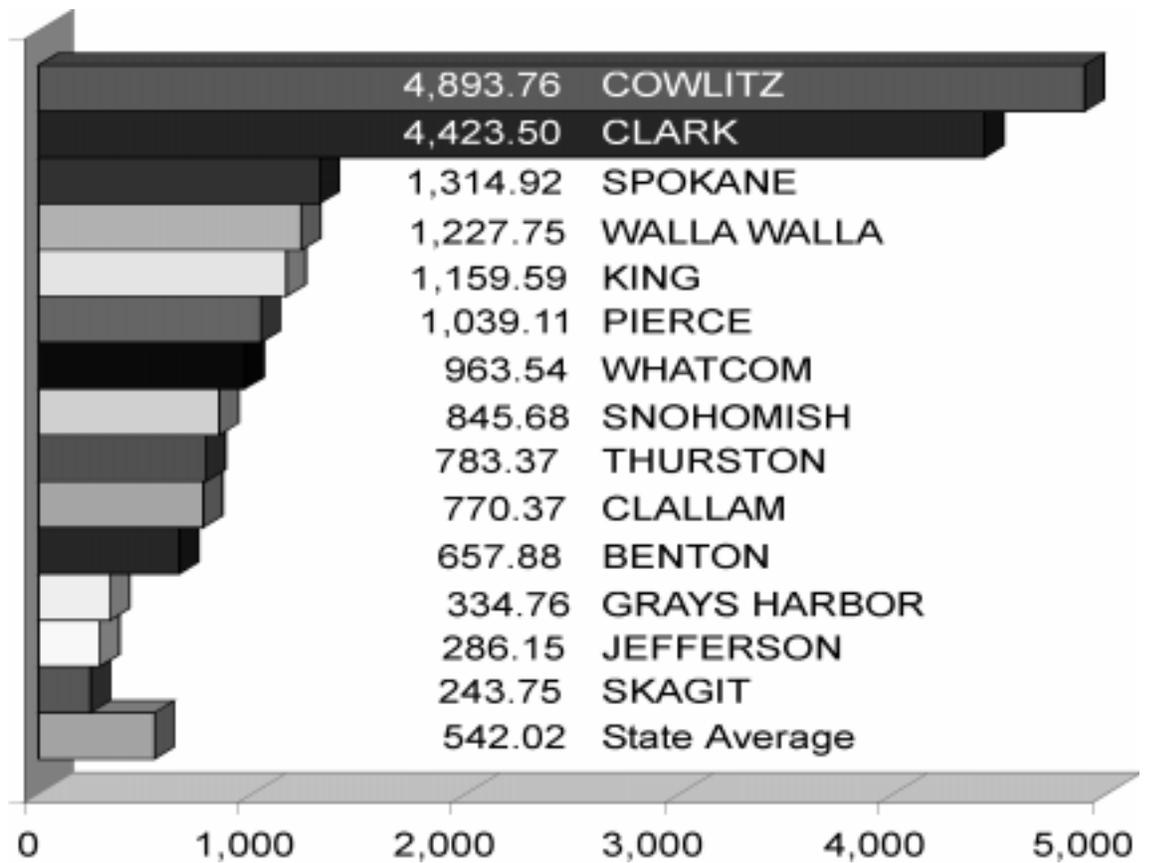


Figure 5
Washington TRI Top 14 Counties, Pounds per Square Mile, 1996

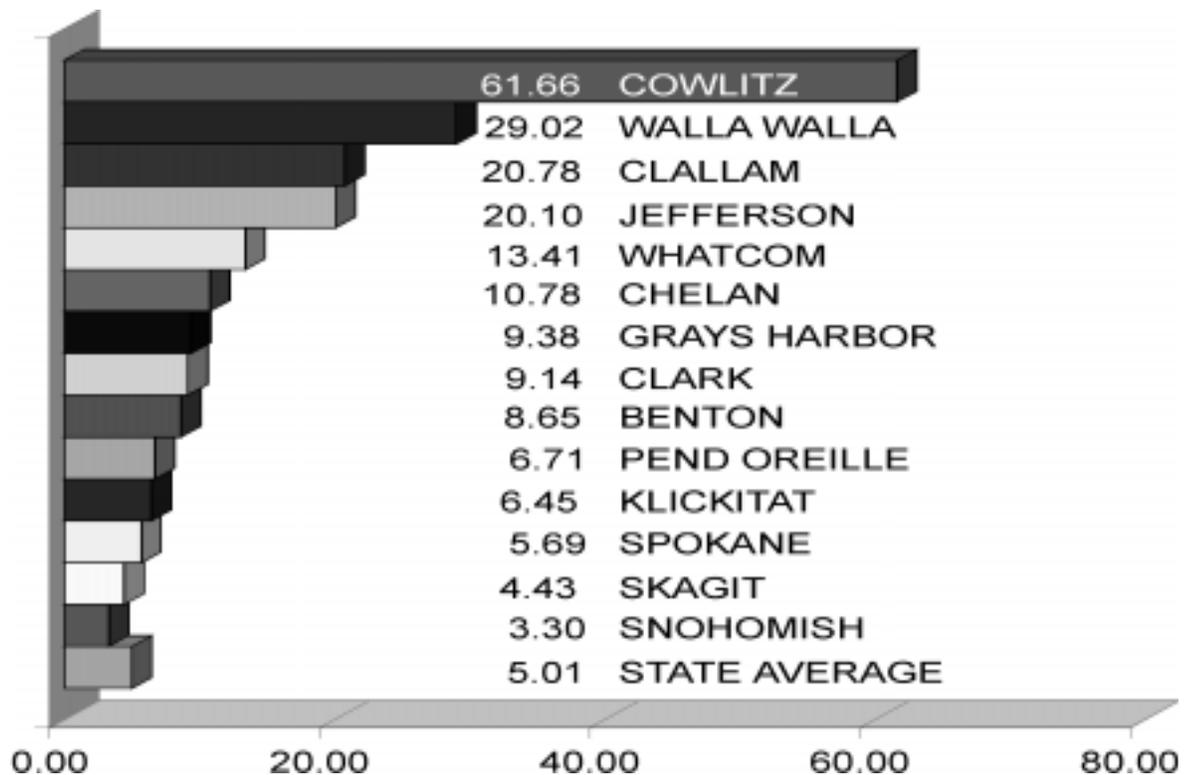


Figure 6
Washington TRI Top 14 Counties, Pounds per Capita, 1996

TRI Releases: 1989 - 1996

Counties Ranked-Pounds per Square Mile

County rankings relating TRI releases per square mile appear in Figure 5. A county may rank higher on releases per area, but lower on the overall county rankings because of its relatively smaller size, even though its releases were also a relatively small number.

Cowlitz County ranked first with 4,894 pounds per square mile. Cowlitz County has a relatively small area and ranked first in the counties in releases. These two factors give it a high number for pounds per area. Clark County ranked second with 4,424 pounds per square mile. Spokane County was third with 1,314 pounds per square mile. Walla Walla, King, and Pierce placed fourth, fifth and sixth respectively.

Statewide releases averaged 542 pounds per square mile.

Counties Ranked-Pounds by Population

Cowlitz County was also number one when TRI releases were ranked by estimated 1996 population in pounds per person (Figure 6). Cowlitz County reported 61.6 pounds of chemical releases per person. Walla Walla, Clallam and Jefferson reported more than 20 pounds per person. Whatcom and Chelan counties ranked fifth and sixth with 13.4 and 10.8 pounds per person reported respectively. Statewide, releases averaged 5 pounds per person. This does not mean that each person was exposed to these “pounds” of chemicals.

Counties that appear high on this list often have fairly high release amounts and average populations (Walla Walla) or moderate releases with very small populations (Jefferson). Counties like King and Pierce counties, with very large populations, do not show up in the ranking of top 14 counties even though they had high total release amounts.

TRI releases to all environmental media decreased 4.5% in 1996 when compared to 1995. However, the picture of how TRI releases have changed over time is dependent upon the criteria used for analysis. For example, the 33/50 Program Chemicals, a group of specifically targeted chemicals, have decreased by over 60 percent since 1988 (Figure 7). When all chemicals that have had constant reporting requirements since 1989 are included, the results also show a decline (132%), although not as dramatic as the 33/50 chemicals. Finally, when all reported chemicals are included, a dramatic decline for reporting years 1988 - 1990 is shown, with more gradual decrease since 1990 (42.5%).

The differences shown in Figure 7 demonstrate the difficulty of making year-to-year comparisons for TRI data. Even when using normalized values, changes like reporting for methanol in 1994 and 1995 can skew the results. To be entirely accurate, perhaps we should only look at those chemicals that have been reported by particular facilities for all eight years. There are some facilities that have modified their chemical use so much that they no longer report. Excluding them from comparative totals would not give credit for reductions in those cases. Comparisons are most accurate when addressing a particular chemical over time. At that level, the original reports will show what has happened at a particular facility.

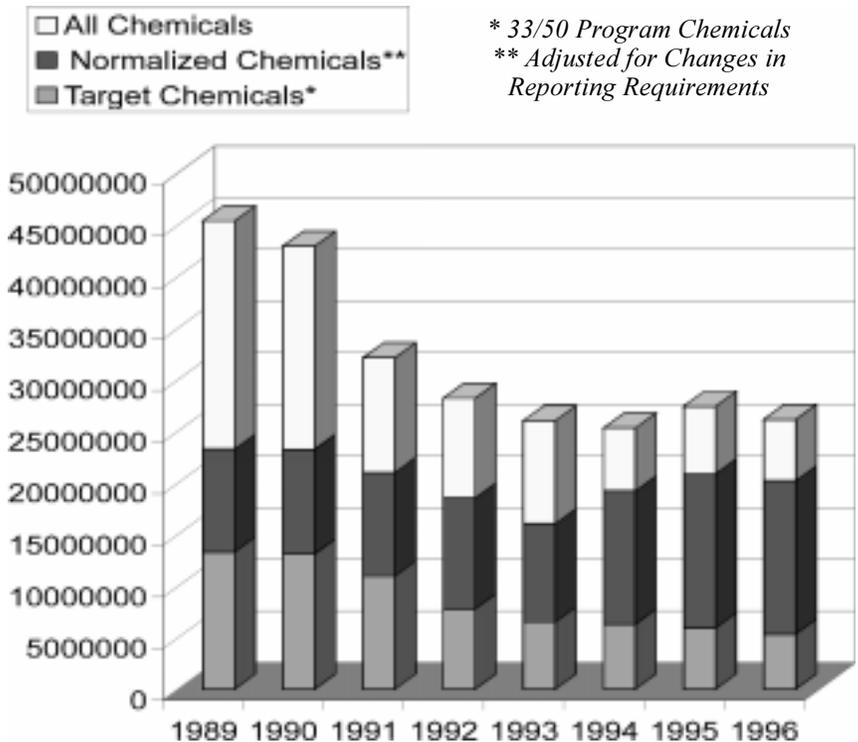


Figure 7
Washington TRI Releases, 1989 - 1996
(in pounds)

Table 4
Washington TRI Off-Site Transfers, Top 20 Facilities, 1996
(in pounds)

NAME	CITY	COUNTY	TRANSFER TYPE				TOTAL
			DISPOSAL	ENERGY REC	RECYCLING	TREATMENT	
BIRMINGHAM STEEL CORP.	SEATTLE	KING	0	0	5,535,844	0	5,535,844
KAISER MEAD WORKS	MEAD	SPOKANE	1,381	0	940,000	0	941,381
HALLMARK REFINING CORP MT VERNON	MT VERNON	SKAGIT	0	0	833,444	0	833,444
BOEING AUBURN	AUBURN	KING	15,237	84,949	677,531	30,654	808,371
KAISER ALUMINUM & CHEMICAL COR	SPOKANE	SPOKANE	660	64,262	441,461	0	506,383
BOEING COMMERCIAL AIRPLANE GRO	EVERETT	SNOHOMISH	28,655	160,691	271,141	42,735	503,222
JORGENSEN FORGE CORP	SEATTLE	KING	452,000	0	0	7,500	459,500
NELSON IRRIGATION CORP	WALLA WALLA	WALLA WALLA	660	0	418,865	0	419,525
TORAY COMPOSITES (AMERICA)	TACOMA	PIERCE	0	172,106	205,871	0	377,977
BOEING FREDERICKSON	PUYALLUP	PIERCE	0	6,338	98,898	270,043	375,279
CIRCUIT TECHNOLOGY INC	REDMOND	KING	14	0	341,142	0	341,156
ACE GALVANING INC	SEATTLE	KING	132	0	308,970	0	309,102
UNOCAL AGRICULTURAL PRODUCTS	KENNEWICK	BENTON	289,528	0	0	0	289,528
SCOTT GALVANIZING CO INC	SEATTLE	KING	70	0	268,420	0	268,490
PACIFIC CIRCUITS INC	REDMOND	KING	0	0	242,662	0	242,662
WEYERHAEUSER COMPANY	LONGVIEW	COWLITZ	240,324	1,000	0	250	241,574
AVX CORP	VANCOUVER	CLARK	77,794	0	109,280	0	187,074
US NAVY BANGOR SUBMARINE BASE	SILVERDALE	KITSAP	0	0	186,288	0	186,288
SEH AMERICA, INC.	VANCOUVER	CLARK	0	0	159,307	11,640	170,947
SPOKANE GALVANIZING, INC.	AIRWAY HEIGHTS	SPOKANE	0	0	160,515	0	160,515
TOTAL - TOP 20 FACILITIES			1,106,455	489,346	11,199,639	362,822	13,158,262

TRI Off-site Transfers, 1996

Transfers reported under the TRI include those chemicals transferred to public owned treatment works and those chemicals transferred to a facility located geographically or physically separate from the reporting facility. These transfers may be for treatment, energy recovery, recycling or disposal. Total transfers for 1996 were 18.4 million pounds.

Transfers to Publicly Owned Treatment Works (POTW)

In 1996, transfers to publicly owned treatment works (POTW) were 1.7 million pounds. A total of 1.5 million pounds of nitrate compounds was reported transferred to POTWs in Washington State in 1996. SEH America in Vancouver reported transfers of 1.5 million pounds. This accounted for 85.8 percent of all POTW transfers. A total of 4 other facilities reported more than 10,000 pounds of chemicals transferred to the POTW. The top four chemicals reported transferred to the POTWs were nitrate compounds, ammonia, phosphoric acid and glycol ethers.

Chemicals sent to the sanitary sewer may be treated there by a variety of methods. Chemicals not removed in these processes typically move into surface waters. POTWs typically treat incoming chemicals with bacteria. Biological processes may reduce the quantities of chemicals into less toxic compounds before they eventually enter surface water. It is difficult to determine how much of a chemical in the surface water is from a reporting facility. Effluent limits from POTWs are monitored and regulated by permits issued by the Department of Ecology. In turn, industrial discharges into sewers are regulated and permitted by the local POTW.

Transfers to Other Off-site Locations

Chemicals reported as transferred to other locations for treatment, storage, disposal, recycling or energy recovery were 16.7 million pounds in 1996 (Table 4). Metals like copper, lead, and manganese, and organic solvents like xylene and toluene are among the chemicals with the greatest amounts being transferred off-site. Facilities reporting the highest amount being transferred off-site were Ballard Brass in Seattle, sending 5.5 million pounds to off-site recycling and Varicast in Mead recycling 940,000 pounds. A total of 20 facilities each reported transfers of more than 150,000 pounds in 1996.

Pollution Prevention Act Reporting

Total waste processed or disposed of by a facility is reported under The Pollution Prevention Act of 1990. These data elements include the amount of chemicals reported under TRI as generated as waste or recycled and used for energy recovery, or treated both on and off the facility premises (Table 5). Facilities report for the current and prior year and provide projected totals for the next two years. Estimates for 1997 and 1998 indicate the total waste processed or disposed of by those facilities required to report under the TRI in Washington State will remain about the same or decrease.

¹ 1997 *Washington State Yearbook, October 1997, Olympia, Washington.*

Table 5
Pollution Prevention
Act Reporting, 1996
(in pounds)

	1995	1996	1997 (PROJECTED)	1998 (PROJECTED)
Energy Recovery Onsite	12,312,387	18,590,609	19,054,654	19,451,525
Energy Recovery Offsite	644,802	863,338	882,361	860,032
Recycling Onsite	79,399,659	80,436,336	73,708,176	76,902,610
Recycling Offsite	13,228,326	11,512,520	7,677,979	6,273,119
Waste Treatment Onsite	84,183,910	90,724,081	89,786,077	87,512,077
Waste Treatment Offsite	2,252,709	2,577,557	6,530,693	8,174,912
Total	192,021,793	204,704,441	197,639,940	199,174,275
Released Onsite & Offsite Disposal	27,664,103	26,968,127	25,966,820	25,566,999
Total Waste	219,685,896	231,672,568	223,606,760	224,741,274

Appendix 1. Washington TRI by Chemical, 1996 (in pounds)

CHEMICAL	Air	Water	Land	Release Total	Disposal Transfer	Release Disposal Total
1,1,1-TRICHLOROETHANE	95,802	5	0	95,807	0	95,807
1,1-DICHLORO-1-FLUORO ETHANE	21,173	0	0	21,173	5,766	26,939
1,2,4-TRIMETHYLBENZENE	16,557	11	4	16,572	0	16,572
1,3-BUTADIENE	916	0	0	916	916	
ACETALDEHYDE	694,970	41,530	0	736,500	10	736,510
ACRYLAMIDE	42	0	0	42	52	94
ACRYLIC ACID	311	0	0	311	0	311
ALUMINUM	482	0	0	482	260,000	260,482
AMMONIA	1,607,413	482,738	5,069	2,095,220	64,000	2,159,220
ANTHRACENE	3,635	14	0	3,649	12,018	15,667
ANTIMONY COMPOUNDS	1,160	8,700	230	10,090	0	10,090
ARSENIC	20	5	0	25	1,250	1,275
ARSENIC COMPOUNDS	5	21	1,290	1,316	1,316	
ASBESTOS (FRIABLE)	4	2	0	6	19,211	19,217
BARIUM COMPOUNDS	618	0	0	618	111,926	112,544
BENZENE	122,134	295	11	122,440	0	122,440
BIPHENYL	2,110	0	0	2,110	1,993	4,103
CADMIUM	0	0	0	0	0	0
CARBON DISULFIDE	239	3	0	242	0	242
CARBONYL SULFIDE	2,490,323	0	0	2,490,323	0	2,490,323
CATECHOL	750	5,607	0	6,357	10	6,367

CHEMICAL	Air	Water	Land	Release Total	Disposal Transfer	Release Disposal Total
CHLORINE	296,796	35,087	0	331,883	0	331,883
CHLORINE DIOXIDE	51,485	0	0	51,485	0	51,485
CHLORODIFLUOROMETHANE	29,142	0	0	29,142	0	29,142
CHLOROFORM	914,559	119,589	0	1,034,148	10	1,034,158
CHROMIUM	1,609	101	500	2,210	2,934	5,144
CHROMIUM COMPOUNDS	1,822	11,638	871	14,331	74,599	88,930
COBALT	0	0	0	0	824	824
COBALT COMPOUNDS	90	90	0	180	1,545	1,725
COPPER	5,877	571	5	6,453	31,476	37,929
COPPER COMPOUNDS	59,070	1,041	687	60,798	18,266	79,064
CREOSOTE	0	0	0	0	250	250
CRESOL (MIXED ISOMERS)	78,796	111	0	78,907	5	78,912
CUMENE	2,596	11	2	2,609	0	2,609
CYCLOHEXANE	240,264	530	3	240,797	0	240,797
DECABROMODIPHENYL OXIDE	0	0	0	0	0	0
DI(2-ETHYLHEXYL) PHTHALATE (DEHP)	3,707	0	0	3,707	0	3,707
DIBUTYL PHTHALATE	9,300	0	0	9,300	0	9,300
DICHLORODIFLUOROME THANE	27,163	0	37	27,200	0	27,200
DICHLOROMETHANE	576,809	251	0	577,060	5	577,065
DICHLOROTETRAFLUOR OETHANE	0	0	0	0	0	0
DIETHANOLAMINE	2,360	6,700	0	9,060	0	9,060
DIISOCYANATES	421	0	0	421	4,540	4,961

CHEMICAL	Air	Water	Land	Release Total	Disposal Transfer	Release Disposal Total
DIMETHYLAMINE	560	7	0	567	0	567
ETHYLBENZENE	120,021	13	13	120,047	0	120,047
ETHYLENE	48,640	0	0	48,640	0	48,640
ETHYLENE GLYCOL	12,603	617	140	13,360	894	14,254
FORMALDEHYDE	109,080	45,720	0	154,800	755	155,555
FORMIC ACID	1,000	0	0	1,000	0	1,000
FREON 113	85,000	0	0	85,000	0	85,000
GLYCOL ETHERS	513,793	5,660	10,301	529,754	505	530,259
HYDROCHLORIC ACID	1,468,611	0	0	1,468,611	77	1,468,688
HYDROGEN FLUORIDE	1,710,574	0	0	1,710,574	310	1,710,884
LEAD	802	0	0	802	434	1,236
LEAD COMPOUNDS	4,518	0	590	5,108	1,670	6,778
LITHIUM CARBONATE	886	255	0	1,141	0	1,141
MANGANESE	1,275	50,620	500	52,395	201,057	253,452
MANGANESE COMPOUNDS	5,334	1,751	0	7,085	191,396	198,481
MERCURY COMPOUNDS	1,460	45	0	1,505	205	1,710
METHAM SODIUM	1,144	3	0	1,147	75	1,222
METHANOL	6,256,198	751,697	0	7,007,895	1,031	7,008,926
METHYL ETHYL KETONE	1,169,493	3,854	0	1,173,347	255	1,173,602
METHYL ISOBUTYL KETONE	84,006	0	0	84,006	0	84,006
METHYL METHACRYLATE	2,226	0	0	2,226	0	2,226
METHYL TERT-BUTYL ETHER	10,125	0	0	10,125	0	10,125
MOLYBDENUM TRIOXIDE	10	5	250	265	250	515

CHEMICAL	Air	Water	Land	Release Total	Disposal Transfer	Release Disposal Total
N-BUTYLALCOHOL	380,712	0	0	380,712	0	380,712
N-HEXANE	273,954	559	6	274,519	0	274,519
N-METHYL-2-PYRROLIDONE	1,554	0	0	1,554	0	1,554
NAPHTHALENE	4,905	0	12	4,917	0	4,917
NICKEL	3,133	5	5	3,143	5,248	8,391
NICKEL COMPOUNDS	4,542	380	60	4,982	0	4,982
NITRATE COMPOUNDS	256	950,210	115,506	1,065,972	255	1,066,227
NITRIC ACID	4,925	10	237	5,172	2,090	7,262
PENTACHLOROPHENOL	510	1	0	511	369	880
PHENANTHRENE	24,250	1	0	24,251	27,729	51,980
PHENOL	165,073	1,833	0	166,906	2,085	168,991
PHOSPHINE	2	0	1,286	1,288	0	1,288
PHOSPHORIC ACID	575	5	0	580	290,438	291,018
POLYCYCLIC AROMATIC COMPOUNDS	32,758	70	250	33,078	953,863	986,941
POTASSIUM DIMETHYLDITHIOCARBAMATE	0	0	0	0	0	0
POTASSIUM N-METHYLDITHIOCARBAMATE	0	0	0	0	0	0
PROPYLENE	40,042	0	0	40,042	0	40,042
PROPYLENE OXIDE	5	0	0	5	0	5
SEC-BUTYLALCOHOL	22,800	0	0	22,800	0	22,800
SELENIUM COMPOUNDS	1	0	0	1	0	1
SILVER	0	0	0	0	0	0

CHEMICAL	Air	Water	Land	Release Total	Disposal Transfer	Release Disposal Total
SODIUM AZIDE	398	0	111	509	244	753
SODIUM DIMETHYLDITHIOCARBAMATE	1,030	0	0	1,030	0	1,030
SODIUM NITRITE	0	272	0	272	0	272
STYRENE	866,496	199	0	866,695	5	866,700
SULFURIC ACID	383,217	0	0	383,217	0	383,217
TETRACHLOROETHYLENE	3,522	0	0	3,522	0	3,522
TOLUENE	1,141,055	1,877	3,067	1,145,999	1,199	1,147,198
TOLUENE DIISOCYANATE (MIXED ISOMERS)	0	0	0	0	0	0
TOLUENE-2,4-DIISOCYANATE	61	0	0	61	0	61
TOLUENE-2,6-DIISOCYANATE	123	0	0	123	0	123
TRICHLOROETHYLENE	123,645	5	0	123,650	1,221	124,871
VINYLACETATE	2,900	650	0	3,550	0	3,550
XYLENE (MIXED ISOMERS)	879,900	166	151	880,217	7,872	888,089
ZINC (FUME OR DUST)	34,615	500	0	35,115	0	35,115
ZINC COMPOUNDS	36,367	600	0	36,967	990	37,957
Grand Total	23,401,215	2,532,241	141,194	26,074,650	2,303,212	28,377,862

Appendix 2. Washington TRI by County, 1996

COUNTY	Number of Facilities	Fugitive Air	Stack Air	Air Total	Land	Wate	Total	POTW	Offsite Transfer
ADAMS	2	38,080	0	38,080	0	0	38,080	0	34,000
BENTON	8	79,485	861,740	941,225	120,132	71,510	1,132,867	0	359,163
CHELAN	2	184,414	476,367	660,781	0	0	660,781	0	66,076
CLALLAM	2	3,250	786,227	789,477	0	560,979	1,350,456	0	630
CLARK	24	484,533	2,041,402	2,525,935	3,470	244,128	2,773,533	1,452,296	520,604
COWLITZ	8	370,011	4,777,823	5,147,834	4	450,619	5,598,457	1,742	1,378,101
DOUGLAS	1	0	0	0	0	0	0	0	9,502
FERRY	1	15	15	30	0	0	30	0	750
FRANKLIN	3	0	0	0	0	0	0	0	12,614
GRANT	5	46,850	1,121	47,971	111	0	48,082	11	34,483
GRAYS HARBOR	4	25,770	608,913	634,683	0	4,700	639,383	15,491	0
JEFFERSON	2	12,370	482,940	495,310	0	21,190	516,500	0	3,600
KING	77	689,626	1,776,050	2,465,676	893	1,030	2,467,599	169,997	8,886,214
KITSAP	2	12,696	1,000	13,696	0	0	13,696	5	186,288
KLICKITAT	1	0	120,588	120,588	0	0	120,588	0	0
LEWIS	3	44	466	510	0	0	510	0	2
PEND OREILLE	1	0	0	0	0	74,520	74,520	0	0
PIERCE	30	400,855	1,294,726	1,695,581	938	45,031	1,741,550	576	1,039,070

COUNTY	Number of Facilities	Fugitive Air	Stack Air	Air Total	Land	Wate	Total	POTW	Offsite Transfer
SKAGIT	7	216,499	179,702	396,201	4,209	22,498	422,908	0	1,002,987
SNOHOMISH	19	351,323	1,006,506	1,357,829	0	416,407	1,774,236	22,328	601,140
SPOKANE	21	1,340,805	969,961	2,310,766	250	617	2,311,633	30,401	1,772,624
STEVENS	2	36,724	25,857	62,581	0	0	62,581	0	0
THURSTON	4	143,126	416,201	559,327	0	0	559,327	5	4,164
WALLA WALLA	5	120,240	1,319,476	1,439,716	0	109,707	1,549,423	0	435,525
WHATCOM	11	397,961	1,140,526	1,538,487	886	509,105	2,048,478	0	91,540
YAKIMA	10	33,098	125,833	158,931	10,301	200	169,432	55	170,660
Grand Total	255	4,987,775	18,413,440	23,401,215	141,194	2,532,241	26,074,650	1,692,907	16,609,737

APPENDIX 3. Washington TRI by County and Facility,

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
ADAMS									
	MCCAIN FOODS, INC.	OTHELLO	AMMONIA	6,080	0	0	6,080	0	0
	Total for: MCCAIN FOODS, INC.			6,080	0	0	6,080	0	0
	NESTLE BRANDS CARNATION CO	OTHELLO	AMMONIA	32,000	0	0	32,000	0	34,000
	Total for: NESTLE BRANDS CARNATION CO			32,000	0	0	32,000	0	34,000
	County Total for	ADAMS		38,080	0	0	38,080	0	34,000
BENTON									
	LAMB-WESTON INC	RICHLAND	CHLORINE	0	0	0	0	0	0
			NITRATE COMPOUNDS	0	0	335	335	0	0
			SODIUM NITRITE	0	0	272	272	0	0
	Total for: LAMB-WESTON INC			0	0	607	607	0	0
	PENWEST FOODS CO.	RICHLAND	PROPYLENE OXIDE	5	0	0	5	0	0
	Total for: PENWEST FOODS CO.			5	0	0	5	0	0
	SANDVIK SPECIAL METALS CORP.	KENNEWICK	HYDROGEN FLUORIDE	255	0	0	255	0	0
			NITRATE COMPOUNDS	0	0	48,000	48,000	0	0
			NITRIC ACID	255	0	0	255	0	0
	Total for: SANDVIK SPECIAL METALS CORP.			510	0	48,000	48,510	0	0
	SIEMENS POWER CORP.	RICHLAND	HYDROGEN FLUORIDE	0	0	0	0	0	69,560
	Total for: SIEMENS POWER CORP.			0	0	0	0	0	69,560
	TESSENDERLO KERLEY INC	KENNEWICK	AMMONIA	13,143	0	0	13,143	0	0
			CARBON DISULFIDE	10	0	0	10	0	0
			DIMETHYLAMINE	500	0	0	500	0	0
			METHAM SODIUM	1,139	0	0	1,139	0	75
			PHOSPHORIC ACID	500	0	0	500	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	TESSENDERLO KERLEY INC	KENNEWICK	SODIUM DIMETHYLDITHIOCARBAMATE	1,030	0	0	1,030	0	0
	Total for: TESSENDERLO KERLEY INC			16,322	0	0	16,322	0	75
	UNOCAL AGRICULTURAL PRODUCTS	KENNEWICK	AMMONIA	88,033	4,389	4,103	96,525	0	0
			AMMONIA	835,600	0	1,926	837,526	0	0
			CHROMIUM	0	0	0	0	0	0
			COPPER	0	0	0	0	0	0
			NITRATE COMPOUNDS	255	109,504	16,864	126,623	0	0
			NITRATE COMPOUNDS	0	6,002	0	6,002	0	0
			NITRIC ACID	0	237	5	242	0	0
			PHOSPHORIC ACID	0	0	5	5	0	289,528
	Total for:	UNOCAL AGRICULTURAL		923,888	120,132	22,903	1,066,923	0	289,528
	WESTERN SINTERING CO INC	RICHLAND	AMMONIA	500	0	0	500	0	0
			COPPER	0	0	0	0	0	0
	Total for: WESTERN SINTERING CO INC			500	0	0	500	0	0
	County Total for	BENTON		941,225	120,132	71,510	1,132,867	0	359,163
CHELAN									
	ALUMINUM COMPANY OF AMERICA	MALAGA	CARBONYL SULFIDE	477,060	0	0	477,060	0	0
			COPPER	1,292	0	0	1,292	0	359
			HYDROGEN FLUORIDE	178,772	0	0	178,772	0	0
			POLYCYCLIC AROMATIC COMPOUNDS	3,657	0	0	3,657	0	20,717
	Total for: ALUMINUM COMPANY OF AMERICA			660,781	0	0	660,781	0	21,076
	TREE TOP INC WENATCHEE	WENATCHEE	NITRATE COMPOUNDS	0	0	0	0	0	45,000
	Total for: TREE TOP INC WENATCHEE			0	0	0	0	0	45,000
	County Total for:	CHELAN		660,781	0	0	660,781	0	66,076

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
CLALLAM									
	DAISHOWA AMERICA CO. LTD.	PORT ANGELES	AMMONIA	250	0	18,019	18,269	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	68,817	0	0	68,817	0	0
	Total for: DAISHOWA AMERICA CO. LTD.		69,067	0	18,019	87,086	0	0	
	RAYONIER INC. PORT ANGELES MILL	PORT ANGELES	AMMONIA	1,695	0	206,600	208,295	0	0
			CHLORINE	45,750	0	0	45,750	0	0
			CHLORINE DIOXIDE	6,850	0	0	6,850	0	0
			CHLOROFORM	162,150	0	1,600	163,750	0	0
			HYDROCHLORIC ACID	131,900	0	0	131,900	0	0
			MANGANESE	0	0	50,600	50,600	0	0
			METHANOL	313,245	0	283,600	596,845	0	0
			METHYL ETHYL KETONE	49,900	0	560	50,460	0	630
			PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	8,920	0	0	8,920	0	0
	Total for:	RAYONIER INC. PORT ANGELES MIL		720,410	0	542,960	1,263,370	0	630
	County Total for	CLALLAM		789,477	0	560,979	1,350,456	0	630
CLARK									
	ALLWEATHER WOOD TREATERS	WASHOUGAL	ARSENIC COMPOUNDS	0	0	17	17	0	280
			CHROMIUM COMPOUNDS	0	0	28	28	0	224
			COPPER COMPOUNDS	0	0	7	7	0	280
	Total for:	ALLWEATHER WOOD TREATERS		0	0	52	52	0	784
	AMERICAN KOTOBUKI ELECTRONICS	VANCOUVER	ANTIMONY COMPOUNDS	0	0	0	0	0	7,192
			DECABROMODIPHENYL OXIDE	0	0	0	0	0	16,282
			N-BUTYL ALCOHOL	10,386	0	0	10,386	0	250

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: AMERICAN KOTOBUKI			10,386	0	0	10,386	0	23,724
	ASC TRIM	VANCOUVER	DIISOCYANATES	131	0	0	131	0	4,540
	Total for: ASC TRIM			131	0	0	131	0	4,540
	ATTBAR, INC.	RIDGEFIELD	STYRENE	84,617	0	0	84,617	0	0
	Total for: ATTBAR, INC.			84,617	0	0	84,617	0	0
	AVX CORP	VANCOUVER	BARIUM COMPOUNDS	0	0	0	0	0	187,074
	Total for: AVX CORP			0	0	0	0	0	187,074
	BOC GASES	VANCOUVER	ARSENIC COMPOUNDS	1	0	0	1	0	1,287
			CADMIUM	0	0	0	0	0	761
			DICHLOROMETHANE	0	0	0	0	0	15
			NAPHTHALENE	0	0	0	0	0	78
			PHOSPHINE	1	643	0	644	0	
			TOLUENE	0	0	0	0	0	8
	Total for: BOC GASES			2	643	0	645	0	2,149
	BOISE CASCADE PAPER DIVISION	VANCOUVER	CHLORINE	28	0	0	28	0	0
	Total for: BOISE CASCADE PAPER DIVISION			28	0	0	28	0	0
	CAMAS MILL	CAMAS	ACETALDEHYDE	48,000	0	4,700	52,700	0	0
			AMMONIA	68,000	0	8,100	76,100	0	0
			CATECHOL	750	0	4,900	5,650	0	0
			CHLORINE	25,000	0	0	25,000	0	0
			CHLORINE DIOXIDE	24,940	0	0	24,940	0	0
			CHLOROFORM	251,000	0	10,000	261,000	0	0
			CHROMIUM COMPOUNDS	0	0	750	750	0	0
			CYCLOHEXANE	190,000	0	250	190,250	0	0
			DICHLOROMETHANE	20,100	0	250	20,350	0	0
			FORMIC ACID	0	0	0	0	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	CAMAS MILL	CAMAS	GLYCOL ETHERS	0	0	3,600	3,600	0	0
			HYDROCHLORIC ACID	8,010	0	0	8,010	0	0
			METHANOL	637,800	0	210,000	847,800	0	14,000
			METHYL ETHYL KETONE	9,950	0	750	10,700	0	0
			NITRIC ACID	0	0	0	0	0	0
			PHENOL	250	0	750	1,000	0	3,000
			PHOSPHORIC ACID	0	0	0	0	0	0
			POTASSIUM DIMETHYLDITHIOCARBAMATE	0	0	0	0	0	0
			POTASSIUM N-METHYLDITHIOCARBAMATE	0	0	0	0	0	0
			SULFURIC ACID	23,000	0	0	23,000	0	0
	Total for: CAMAS MILL			1,306,800	0	244,050	1,550,850	0	17,000
	CHRISTENSEN SHIPYARDS INC	VANCOUVER	STYRENE	5,907	0	0	5,907	0	0
	Total for: CHRISTENSEN SHIPYARDS INC			5,907	0	0	5,907	0	0
	COLUMBIA MACHINE INC	VANCOUVER	MANGANESE	18	0	0	18	0	18,424
			NICKEL	5	0	0	5	0	8,137
	Total for: COLUMBIA MACHINE INC			23	0	0	23	0	26,561
	CORROSION CONTROLLERS	WASHOUGAL	STYRENE	5,700	0	0	5,700	0	0
	Total for: CORROSION CONTROLLERS			5,700	0	0	5,700	0	0
	DEWILS INDUSTRIES INC	VANCOUVER	METHYL ETHYL KETONE	13,903	0	0	13,903	0	0
	Total for: DEWILS INDUSTRIES INC			13,903	0	0	13,903	0	0
	DISCOVERY SPAS	VANCOUVER	DICHLOROMETHANE	5,700	0	0	5,700	0	0
			STYRENE	10,760	0	0	10,760	0	1,172
	Total for: DISCOVERY SPAS			16,460	0	0	16,460	0	1,172
	EXTERIOR WOOD, INC.	WASHOUGAL	ARSENIC COMPOUNDS	2	1,290	4	1,296	0	1,290
			CHROMIUM COMPOUNDS	4	850	5	859	0	850

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	VAN RICH CASTING VARICAST	VANCOUVER	MANGANESE	500	0	0	500	0	500
	Total for: VAN RICH CASTING VARICAST			500	0	0	500	0	500
	VANALCO INC	VANCOUVER	CARBONYL SULFIDE	849,000	0	0	849,000	0	0
			COPPER	255	0	0	255	0	17,396
			HYDROGEN FLUORIDE	200,000	0	0	200,000	0	0
	Total for: VANALCO INC			1,049,255	0	0	1,049,255	0	17,396
	VININGS IND. INC.	WASHOUGAL	AMMONIA	48	0	0	48	0	0
			ARSENIC COMPOUNDS	1	0	0	1	0	0
			CARBON DISULFIDE	229	0	3	232	0	0
			CHROMIUM COMPOUNDS	1	0	0	1	0	0
			COPPER COMPOUNDS	1	0	0	1	0	0
			DIMETHYLAMINE	60	0	7	67	0	0
			GLYCOL ETHERS	3	0	0	3	0	0
			METHAM SODIUM	5	0	3	8	0	0
	Total for: VININGS IND. INC.			348	0	13	361	0	0
	County Total for CLARK			2,525,935	3,470	244,128	2,773,533	1,452,296	520,604
COWLITZ									
	ALL PURE CHEMICAL COMPANY	KALAMA	CHLORINE	20	0	0	20	0	0
	Total for: ALL PURE CHEMICAL COMPANY			20	0	0	20	0	0
	CYTEC INDUSTRIES INC	LONGVIEW	ACRYLAMIDE	42	0	0	42	214	52
			FORMALDEHYDE	120	0	0	120	1,528	0
	Total for: CYTEC INDUSTRIES INC			162	0	0	162	1,742	52
	HOECHST CELANESE CORPORATION	KALAMA	ZINC COMPOUNDS	2	0	0	2	0	0
	Total for: HOECHST CELANESE CORPORATION			2	0	0	2	0	0
	KALAMA CHEMICAL, INC.	KALAMA	ACETALDEHYDE	576	0	0	576	0	0

County	Name	City	Chemical	Air	Land	Water	Total Transfer	POTW Transfer	Off-site
	KALAMA CHEMICAL, INC.	KALAMA	AMMONIA	3,440	0	130	3,570	0	0
			BENZENE	53,620	0	0	53,620	0	5,631
			BIPHENYL	2,110	0	0	2,110	0	2,008
			COBALT COMPOUNDS	90	0	90	180	0	7,972
			COPPER COMPOUNDS	540	0	30	570	0	122,632
			METHANOL	25,480	0	0	25,480	0	89
			PHENOL	9,090	0	0	9,090	0	2,199
			TOLUENE	126,890	0	0	126,890	0	820
	Total for: KALAMA CHEMICAL, INC.			221,836	0	250	222,086	0	141,351
	LONGVIEW FIBRE COMPANY	LONGVIEW	ACETALDEHYDE	33,005	0	0	33,005	0	0
			AMMONIA	37,005	0	31,000	68,005	0	0
			CATECHOL	0	0	250	250	0	0
			FORMALDEHYDE	11,005	0	5	11,010	0	0
			HYDROCHLORIC ACID	72,005	0	0	72,005	0	0
			METHANOL	380,000	0	0	380,000	0	0
			NITRATE COMPOUNDS	0	0	94,000	94,000	0	0
			NITRIC ACID	0	0	0	0	0	0
			PHENOL	3,505	0	170	3,675	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: LONGVIEW FIBRE COMPANY			536,525	0	125,425	661,950	0	0
	REYNOLDS METALS CO.	LONGVIEW	ANTHRACENE	3,605	0	1	3,606	0	12,133
			CARBONYL SULFIDE	0	0	0	0	0	0
			CHLORINE	1,151	0	1,229	2,380	0	0
			COPPER	6	0	41	47	0	8,313
			HYDROGEN FLUORIDE	196,735	0	0	196,735	0	0
			LITHIUM CARBONATE	0	0	0	0	0	0
			MANGANESE	2	0	9	11	0	10,201
			PHENANTHRENE	24,250	0	1	24,251	0	27,901

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	REYNOLDS METALS CO. COMPOUNDS	LONGVIEW	POLYCYCLIC AROMATIC	22,806	0	68	22,874	0	932,791
	Total for: REYNOLDS METALS CO.			248,555	0	1,349	249,904	0	991,339
	SOLVAY INTEROX, INC.	LONGVIEW	1,2,4-TRIMETHYLBENZENE	592	2	0	594	0	2,702
			NAPHTHALENE	313	2	0	315	0	1,083
			NITRIC ACID	0	0	0	0	0	0
	Total for: SOLVAY INTEROX, INC.			905	4	0	909	0	3,785
	WEYERHAEUSER COMPANY	LONGVIEW	ACETALDEHYDE	462,685	0	1,500	464,185	0	10
			AMMONIA	80,294	0	5	80,299	0	0
			ASBESTOS (FRIABLE)	3	0	2	5	0	19,211
			BARIUM COMPOUNDS	618	0	0	618	0	34,132
			CATECHOL	0	0	250	250	0	10
			CHLORINE	1,190	0	31,215	32,405	0	0
			CHLORINE DIOXIDE	6,757	0	0	6,757	0	0
			CHLOROFORM	149,409	0	88,789	238,198	0	10
			CRESOL (MIXED ISOMERS)	44,700	0	0	44,700	0	5
			DICHLOROMETHANE	30,746	0	1	30,747	0	255
			FORMALDEHYDE	86,117	0	45,689	131,806	0	5
			FORMIC ACID	0	0	0	0	0	0
			HYDROCHLORIC ACID	103,606	0	0	103,606	0	0
			MANGANESE COMPOUNDS	1,636	0	0	1,636	0	186,416
			METHANOL	2,756,492	0	152,296	2,908,788	0	250
			METHYL ETHYL KETONE	190,958	0	2,039	192,997	0	255
			NITRATE COMPOUNDS	0	0	11	11	0	250
			PHENOL	128,275	0	76	128,351	0	5
			PHOSPHORIC ACID	0	0	0	0	0	0
			STYRENE	21,809	0	199	22,008	0	505
			SULFURIC ACID	56,107	0	0	56,107	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	WEYERHAEUSER COMPANY	LONGVIEW	TOLUENE	18,427	0	1,523	19,950	0	255
	Total for: WEYERHAEUSER COMPANY			4,139,829	0	323,595	4,463,424	0	241,574
	County Total for	COWLITZ		5,147,834	4	450,619	5,598,457	1,742	1,378,101
DOUGLAS									
	AMERICAN SILICON TECHNOLOGIES	ROCK ISLAND	COPPER	0	0	0	0	0	9,502
	Total for: AMERICAN SILICON TECHNOLOGIES			0	0	0	0	0	9,502
	County Total for	DOUGLAS		0	0	0	0	0	9,502
FERRY									
	INCHELIUM TRIBAL WOOD TREATMENT	INCHELIUM	ARSENIC	10	0	0	10	0	250
			CHROMIUM	10	0	0	10	0	250
			COPPER	10	0	0	10	0	250
	Total for: INCHELIUM TRIBAL WOOD			30	0	0	30	0	750
	County Total for	FERRY		30	0	0	30	0	750
FRANKLIN									
	CBI SERVICES	PASCO	CHROMIUM	0	0	0	0	0	7,851
			NICKEL	0	0	0	0	0	4,763
	Total for: CBI SERVICES			0	0	0	0	0	12,614
	LAMB WESTON	CONNELL	NITRATE COMPOUNDS	0	0	0	0	0	0
	Total for: LAMB WESTON			0	0	0	0	0	0
	LAMB-WESTON, INC	PASCO	CHLORINE	0	0	0	0	0	0
	Total for: LAMB-WESTON, INC			0	0	0	0	0	0
	County Total for	FRANKLIN		0	0	0	0	0	12,614
GRANT									
	ADVANCED SILICON MATERIALS INC	MOSES LAKE	CHLORODIFLUOROMETHANE	24,150	0	0	24,150	0	0
			HYDROCHLORIC ACID	2,000	0	0	2,000	0	0
			NITRIC ACID	43	0	0	43	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for:	ADVANCED SILICON MATERIALS INC		26,193	0	0	26,193	0	0
	BASIC AMERICAN FOODS	MOSES LAKE	AMMONIA	368	0	0	368	0	0
			CHLORINE	1	0	0	1	0	0
	Total for: BASIC AMERICAN FOODS			369	0	0	369	0	0
	INFLATION SYSTEMS INC	MOSES LAKE	SODIUM AZIDE	398	111	0	509	11	4,483
	Total for:	INFLATION SYSTEMS INC		398	111	0	509	11	4,483
	LAMB-WESTON, INC.	QUINCY	CHLORINE	11	0	0	11	0	0
	Total for:	LAMB-WESTON, INC.		11	0	0	11	0	0
	NESTLE BRANDS POTATO PROCESS	MOSES LAKE	AMMONIA	21,000	0	0	21,000	0	30,000
	Total for: NESTLE BRANDS POTATO PROCESS			21,000	0	0	21,000	0	30,000
	County Total for	GRANT		47,971	111	0	48,082	11	34,483
GRAYS									
	HOWARD MOE ENTERPRISES, INC.	HOQUIAM	STYRENE	749	0	0	749	0	0
	Total for: HOWARD MOE ENTERPRISES, INC.			749	0	0	749	0	0
	MORTON INTERNATIONAL, INC.	ELMA	METHANOL	64,913	0	0	64,913	15,491	0
	Total for: MORTON INTERNATIONAL, INC.			64,913	0	0	64,913	15,491	0
	WESTPORT SHIPYARD INC	WESTPORT	STYRENE	10,206	0	0	10,206	0	0
	Total for: WESTPORT SHIPYARD INC			10,206	0	0	10,206	0	0
	WEYERHAEUSER	COSMOPOLIS	ACETALDEHYDE	44,000	0	0	44,000	0	0
			AMMONIA	250	0	2,900	3,150	0	0
			CHLORINE	2,305	0	0	2,305	0	0
			CHLORINE DIOXIDE	1,005	0	0	1,005	0	0
			FORMIC ACID	0	0	0	0	0	0
			METHANOL	490,250	0	1,800	492,050	0	0
			NITRIC ACID	5	0	0	5	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	WEYERHAEUSER	COSMOPOLIS	PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	21,000	0	0	21,000	0	0
	Total for: WEYERHAEUSER			558,815	0	4,700	563,515	0	0
	County Total for	GRAYS HARBOR		634,683	0	4,700	639,383	15,491	0
JEFFERSON									
	ADMIRAL MARINE WORKS INC	PORT	STYRENE	7,100	0	0	7,100	0	3,600
	Total for: ADMIRAL MARINE WORKS INC			7,100	0	0	7,100	0	3,600
	PORT TOWNSEND PAPER CORP	PORT	ACETALDEHYDE	5,300	0	780	6,080	0	0
			AMMONIA	45,250	0	6,400	51,650	0	0
			CATECHOL	0	0	90	90	0	0
			GLYCOL ETHERS	920	0	920	1,840	0	0
			HYDROCHLORIC ACID	260,000	0	0	260,000	0	0
			METHANOL	141,500	0	13,000	154,500	0	0
			PHENOL	240	0	0	240	0	0
			SULFURIC ACID	35,000	0	0	35,000	0	0
	Total for: PORT TOWNSEND PAPER			488,210	0	21,190	509,400	0	0
	County Total for	JEFFERSON		495,310	0	21,190	516,500	0	3,600
KING									
	ACE GALVANING INC	SEATTLE	ZINC COMPOUNDS	1,500	0	0	1,500	0	309,102
	Total for: ACE GALVANING INC			1,500	0	0	1,500	0	309,102
	ACE TANK & EQUIPMENT CO	SEATTLE	METHYL ETHYL KETONE	12,002	0	0	12,002	1	0
	Total for: ACE TANK & EQUIPMENT CO			12,002	0	0	12,002	1	0
	ALASKAN COPPER WORKS	SEATTLE	CHROMIUM COMPOUNDS	15	0	0	15	5	10,911
			MANGANESE COMPOUNDS	5	0	0	5	0	750
			NICKEL COMPOUNDS	5	0	0	5	5	8,692
			NITRIC ACID	5	0	0	5	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for:	ALASKAN COPPER WORKS		30	0	0	30	10	20,353
	AMERICAN MILLWORK INC	KIRKLAND	ETHYLBENZENE	10,000	0	0	10,000	0	0
			METHYL ETHYL KETONE	74,000	0	0	74,000	0	0
			METHYL ISOBUTYL KETONE	13,000	0	0	13,000	0	0
			TOLUENE	90,000	0	0	90,000	0	0
			XYLENE (MIXED ISOMERS)	58,000	0	0	58,000	0	0
	Total for:	AMERICAN MILLWORK INC		245,000	0	0	245,000	0	0
	AMERICAN NATIONAL CAN COMPANY	KENT	GLYCOL ETHERS	135,800	0	0	135,800	0	0
			HYDROGEN FLUORIDE	27	0	0	27	0	0
			MANGANESE	0	0	0	0	28	0
			N-BUTYL ALCOHOL	108,832	0	0	108,832	0	0
	Total for:	AMERICAN NATIONAL CAN		244,659	0	0	244,659	28	0
	ARIMA MARINE	AUBURN	STYRENE	7,338	0	0	7,338	0	0
	Total for:	ARIMA MARINE		7,338	0	0	7,338	0	0
	ART BRASS PLATING INC	SEATTLE	TRICHLOROETHYLENE	15,910	0	0	15,910	0	750
	Total for:	ART BRASS PLATING INC		15,910	0	0	15,910	0	750
	ASAHIPEN AMERICA, INC.	SEATTLE	ETHYLENE GLYCOL	255	0	0	255	250	250
	Total for:	ASAHIPEN AMERICA, INC.		255	0	0	255	250	250
	ASKO PROCESSING, INC.	SEATTLE	TRICHLOROETHYLENE	9,767	0	0	9,767	0	610
	Total for:	ASKO PROCESSING, INC.		9,767	0	0	9,767	0	610
	BALL FOSTER GLASS CONTAINER CO	SEATTLE	CHROMIUM COMPOUNDS	5	0	0	5	0	54,586
	Total for:	BALL FOSTER GLASS CONTAINER CO		5	0	0	5	0	54,586
	BALLARD BRASS	SEATTLE	COPPER COMPOUNDS	0	0	0	0	0	2,544
	Total for:	BALLARD BRASS		0	0	0	0	0	2,544
	BCAG Fabrication Division-Aubu	Auburn	CHROMIUM COMPOUNDS	141	0	0	141	73	143,414

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	BCAG Fabrication Division-Aubu	Auburn	COPPER	0	0	0	0	76	496,300
			HYDROCHLORIC ACID	0	0	0	0	0	327
			HYDROGEN FLUORIDE	0	0	0	0	0	1,100
			METHYL ETHYL KETONE	11,000	0	0	11,000	350	82,184
			NICKEL	0	0	0	0	51	53,800
			NITRIC ACID	0	0	0	0	0	16,110
			PHOSPHORIC ACID	0	0	0	0	0	161
			SEC-BUTYL ALCOHOL	22,800	0	0	22,800	0	0
			TOLUENE	30,100	0	0	30,100	0	6,527
			XYLENE (MIXED ISOMERS)	7,300	0	0	7,300	0	8,448
	Total for: BCAG Fabrication Division-Aubu			71,341	0	0	71,341	550	808,371
	BIRD-JOHNSON CO COOLIDGE PROPE	SEATTLE	CHROMIUM	5	250	0	255	0	4,000
	Total for: BIRD-JOHNSON CO COOLIDGE PROPE			5	250	0	255	0	4,000
	BIRMINGHAM STEEL CORP.	SEATTLE	CHROMIUM COMPOUNDS	0	0	0	0	0	0
			LEAD COMPOUNDS	2,696	0	0	2,696	0	413,220
			MANGANESE COMPOUNDS	3,421	0	0	3,421	0	523,828
			NICKEL COMPOUNDS	27	0	0	27	0	4,086
			ZINC COMPOUNDS	30,008	0	0	30,008	0	4,594,710
	Total for: BIRMINGHAM STEEL CORP.			36,152	0	0	36,152	0	5,535,844
	BOC GASES SEATTLE	SEATTLE	ARSENIC COMPOUNDS	1	0	0	1	0	1,287
			CADMIUM	0	0	0	0	0	761
			DICHLOROMETHANE	0	0	0	0	0	15
			NAPHTHALENE	0	0	0	0	0	78
			PHOSPHINE	1	643	0	644	0	0
			TOLUENE	0	0	0	0	0	8
	Total for: BOC GASES SEATTLE			2	643	0	645	0	2,149

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	BOEING COMMERCIAL AIRPLANE GRO	RENTON	AMMONIA	12,000	0	0	12,000	0	0
			COPPER	0	0	0	0	5	32,465
			FREON 113	52,000	0	0	52,000	0	2,010
		SEATTLE	GLYCOL ETHERS	1,000	0	0	1,000	9,200	15
			GLYCOL ETHERS	255	0	0	255	0	1,010
		RENTON	GLYCOL ETHERS	1,750	0	0	1,750	14,000	1,260
			MANGANESE	10	0	0	10	5	11,250
		SEATTLE	METHYL ETHYL KETONE	6,450	0	0	6,450	0	1,255
		RENTON	METHYL ETHYL KETONE	132,000	0	0	132,000	250	30,560
		SEATTLE	METHYL ETHYL KETONE	10,250	0	0	10,250	250	9,155
			NAPHTHALENE	250	0	0	250	0	255
			NAPHTHALENE	250	0	0	250	0	0
		RENTON	TOLUENE	26,300	0	0	26,300	0	20,765
		SEATTLE	TOLUENE	11,250	0	0	11,250	5	9,410
			TOLUENE	755	0	0	755	0	1,005
	Total for: BOEING COMMERCIAL AIRPLANE			254,520	0	0	254,520	23,715	120,415
	BOEING SPACE CENTER,	KENT	CHROMIUM	0	0	0	0	31	7,703
		KENT	COBALT	0	0	0	0	0	13,342
			COPPER	250	0	0	250	41	11,109
			HYDROGEN FLUORIDE	250	0	0	250	0	750
			MANGANESE	0	0	0	0	0	3,554
			METHYL ETHYL KETONE	9,600	0	0	9,600	0	3,065
			NICKEL	5	0	0	5	12	21,202
			NITRATE COMPOUNDS	0	0	0	0	37,000	0
			NITRIC ACID	250	0	0	250	0	52,600
	Total for: BOEING SPACE CENTER, KENT			10,355	0	0	10,355	37,084	113,325

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	BORDEN PACKAGING AND INDUSTRIAL	KENT	FORMALDEHYDE	1,820	0	0	1,820	750	0
			METHANOL	8,800	0	0	8,800	250	0
			PHENOL	255	0	0	255	750	0
	Total for: BORDEN PACKAGING AND			10,875	0	0	10,875	1,750	0
	CAPITAL INDUSTRIES INC	SEATTLE	METHYL ISOBUTYL KETONE	12,229	0	0	12,229	0	250
			XYLENE (MIXED ISOMERS)	11,677	0	0	11,677	0	250
	Total for: CAPITAL INDUSTRIES INC			23,906	0	0	23,906	0	500
	CIRCUIT SERVICES INC	BELLEVUE	COPPER	1	0	0	1	100	45,204
			NITRATE COMPOUNDS	1	0	0	1	250	10,084
	Total for: CIRCUIT SERVICES INC			2	0	0	2	350	55,288
	CIRCUIT TECHNOLOGY INC	REDMOND	AMMONIA	44,099	0	0	44,099	97,690	222,035
			COPPER	5	0	0	5	174	119,121
			NITRIC ACID	10	0	0	10	0	0
	Total for:	CIRCUIT TECHNOLOGY INC		44,114	0	0	44,114	97,864	341,156
	CIRCUITS ENGINEERING	BOTHELL	COPPER	0	0	0	0	7	22,434
	Total for: CIRCUITS ENGINEERING			0	0	0	0	7	22,434
	COATINGS UNLIMITED INC	KENT	METHYL ETHYL KETONE	28,702	0	0	28,702	0	1,388
			XYLENE (MIXED ISOMERS)	17,515	0	0	17,515	0	814
	Total for: COATINGS UNLIMITED INC			46,217	0	0	46,217	0	2,202
	CRAIN IND. INC. KENT DIV.	KENT	DICHLOROMETHANE	387,138	0	0	387,138	0	0
			TOLUENE-2,4-DIISOCYANATE	61	0	0	61	0	0
			TOLUENE-2,6-DIISOCYANATE	123	0	0	123	0	0
	Total for: CRAIN IND. INC. KENT DIV.			387,322	0	0	387,322	0	0
	DANIEL BOONE PAINT CO	TUKWILA	METHANOL	250	0	0	250	0	
			TOLUENE	750	0	0	750	0	
			XYLENE (MIXED ISOMERS)	750	0	0	750	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: DANIEL BOONE PAINT CO			1,750	0	0	1,750	0	0
	DARIGOLD-ISSAQUAH	ISSAQUAH	NITRIC ACID	0	0	0	0	2,667	0
			PHOSPHORIC ACID	0	0	0	0	3,256	0
	Total for: DARIGOLD-ISSAQUAH			0	0	0	0	5,923	0
	DAVIS WIRE CORPORATION	KENT	LEAD	0	0	0	0	5	378
	Total for: DAVIS WIRE CORPORATION			0	0	0	0	5	378
	DYNO BATTERY CO	SEATTLE	LEAD	17	0	0	17	0	0
			SULFURIC ACID	108	0	0	108	0	0
	Total for: DYNO BATTERY CO			125	0	0	125	0	0
	EXOTIC METALS FORMING CO	KENT	NITRIC ACID	250	0	0	250	0	13,900
	Total for: EXOTIC METALS FORMING CO			250	0	0	250	0	13,900
	FARWEST PAINT MANUFACTURING	TUKWILA	TOLUENE	255	0	0	255	0	0
			XYLENE (MIXED ISOMERS)	255	0	0	255	0	0
	Total for: FARWEST PAINT MANUFACTURING			510	0	0	510	0	0
	FISHER MILLS INC	SEATTLE	CHLORINE	0	0	0	0	0	0
	Total for: FISHER MILLS INC			0	0	0	0	0	0
	FORMULA CORP	SEATTLE	GLYCOL ETHERS	750	0	0	750	250	500
			PHOSPHORIC ACID	5	0	0	5	250	500
	Total for: FORMULA CORP			755	0	0	755	500	1,000
	GACO WESTERN, INC.	TUKWILA	DIISOCYANATES	0	0	0	0	0	0
			METHYL ISOBUTYL KETONE	681	0	0	681	0	250
			TOLUENE	581	0	0	581	0	750
			TOLUENE DIISOCYANATE (MIXED ISOMERS)	0	0	0	0	0	0
			XYLENE (MIXED ISOMERS)	1,208	0	0	1,208	0	250
	Total for: GACO WESTERN, INC.			2,470	0	0	2,470	0	1,250

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	HAWORTH INC LUNSTEAD OPS	KENT	METHANOL	11,447	0	0	11,447	0	3,074
			TOLUENE	13,519	0	0	13,519	0	3,609
	Total for: HAWORTH INC LUNSTEAD OPS			24,966	0	0	24,966	0	6,683
	HEXCEL CORPORATION - STRUCTURE	KENT	METHYL ETHYL KETONE	19,700	0	0	19,700	0	6,600
	Total for: HEXCEL CORPORATION -			19,700	0	0	19,700	0	6,600
	HUNTSMAN PACKAGING CORP	KENT	GLYCOL ETHERS	2,900	0	0	2,900	0	750
	Total for: HUNTSMAN PACKAGING CORP			2,900	0	0	2,900	0	750
	HUSSMANN CORPORATION	SEATTLE	1,1-DICHLORO-1-FLUOROETHANE	1,600	0	0	1,600	0	0
			DIISOCYANATES	0	0	0	0	0	0
	Total for: HUSSMANN CORPORATION			1,600	0	0	1,600	0	0
	HYTEK FINISHES COMPANY	KENT	METHYL ETHYL KETONE	12,821	0	0	12,821	0	2,547
			NITRIC ACID	10	0	0	10	0	0
	Total for: HYTEK FINISHES COMPANY			12,831	0	0	12,831	0	2,547
	J B J INC DBA LIFESTYLES	WOODINVILLE	STYRENE	4,499	0	0	4,499	0	0
	Total for: J B J INC DBA LIFESTYLES			4,499	0	0	4,499	0	0
	JORGENSEN FORGE CORP	SEATTLE	ALUMINUM	0	0	0	0	0	260,000
			LEAD	0	0	0	0	0	2,800
			MANGANESE	0	0	0	0	0	192,000
			NICKEL	0	0	0	0	0	2,300
			ZINC (FUME OR DUST)	0	0	0	0	0	2,400
	Total for: JORGENSEN FORGE CORP			0	0	0	0	0	459,500
	K-2 CORPORATION	VASHON	XYLENE (MIXED ISOMERS)	15,628	0	0	15,628	0	23,305
	Total for: K-2 CORPORATION			15,628	0	0	15,628	0	23,305
	KENWORTH TRUCK CO	TUKWILA	ETHYLENE GLYCOL	31	0	0	31	0	1,620

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	KENWORTH TRUCK CO	TUKWILA	METHYL ETHYL KETONE	5,070	0	0	5,070	0	36,220
			TOLUENE	6,650	0	0	6,650	0	40,780
	Total for: KENWORTH TRUCK CO			11,751	0	0	11,751	0	78,620
	KENWORTH TRUCK CO	RENTON	ETHYLENE GLYCOL	61	0	0	61	0	12,700
	RENTON		GLYCOL ETHERS	9,160	0	0	9,160	0	3,300
			METHYL ETHYL KETONE	34,100	0	0	34,100	0	12,000
			TOLUENE	41,600	0	0	41,600	0	14,000
			XYLENE (MIXED ISOMERS)	19,400	0	0	19,400	0	6,500
	Total for: KENWORTH TRUCK CO RENTON			104,321	0	0	104,321	0	48,500
	LILLY INDUSTRIES, INC.	SEATTLE	ETHYLBENZENE	295	0	0	295	0	0
			GLYCOL ETHERS	1,065	0	0	1,065	0	0
			METHANOL	2,520	0	0	2,520	0	0
			METHYL ETHYL KETONE	2,626	0	0	2,626	0	0
			METHYL ISOBUTYL KETONE	4,150	0	0	4,150	0	0
			N-BUTYL ALCOHOL	1,427	0	0	1,427	0	0
			TOLUENE	7,230	0	0	7,230	0	0
			XYLENE (MIXED ISOMERS)	4,370	0	0	4,370	0	26,258
	Total for: LILLY INDUSTRIES, INC.			23,683	0	0	23,683	0	26,258
	LIVINGSTON INC	AUBURN	METHYL METHACRYLATE	894	0	0	894	0	680
			STYRENE	59,905	0	0	59,905	0	1,168
	Total for: LIVINGSTON INC			60,799	0	0	60,799	0	1,848
	MIKRON INDUSTRIES INC.	KENT	ANTIMONY COMPOUNDS	660	0	0	660	0	0
			CHROMIUM COMPOUNDS	550	0	0	550	0	0
	Total for: MIKRON INDUSTRIES INC.			1,210	0	0	1,210	0	0
	MODINE AFTERMARKET	SEATTLE	COPPER	16	0	0	16	0	20,712
			HOLDINGS, I						
			LEAD	7	0	0	7	0	6,382

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: MODINE AFTERMARKET HOLDINGS,			23	0	0	23	0	27,094
	MUTUAL MATERIALS CO NEWCASTLE BRICK PLANT	RENTON	HYDROGEN FLUORIDE	67,570	0	0	67,570	0	0
	Total for: MUTUAL MATERIALS CO			67,570	0	0	67,570	0	0
	NON-FERROUS METALS INC.	SEATTLE	LEAD	18	0	0	18	0	0
	Total for: NON-FERROUS METALS INC.			18	0	0	18	0	0
	NORTHLAKE CABINET CORP	WOODINVILLE	TOLUENE	25,429	0	0	25,429	0	0
	Total for: NORTHLAKE CABINET CORP			25,429	0	0	25,429	0	0
	NORTHWEST CASTINGS	SEATTLE	CHROMIUM	250	0	0	250	0	0
			MANGANESE	250	0	0	250	0	0
	Total for: NORTHWEST CASTINGS			500	0	0	500	0	0
	NRG BARRIERS KENT	KENT	1,1-DICHLORO-1- FLUOROETHANE	19,573	0	0	19,573	0	5,766
			CHLORODIFLUOROETHANE	3,831	0	0	3,831	0	0
			DIISOCYANATES	25	0	0	25	0	0
	Total for: NRG BARRIERS KENT			23,429	0	0	23,429	0	5,766
	O'BRIEN INTERNATIONAL	REDMOND	DIISOCYANATES	255	0	0	255	0	0
	Total for: O'BRIEN INTERNATIONAL INC			255	0	0	255	0	0
	PACIFIC CIRCUITS INC	REDMOND	AMMONIA	13,306	0	0	13,306	0	44,222
			COPPER	0	0	0	0	250	198,440
			FORMALDEHYDE	750	0	0	750	750	0
	Total for: PACIFIC CIRCUITS INC			14,056	0	0	14,056	1,000	242,662
	PACIFIC COCA-COLA BOTTLING BELLEVUE	BELLEVUE	PHOSPHORIC ACID	0	0	0	0	568	0
	Total for: PACIFIC COCA-COLA BOTTLING			0	0	0	0	568	0
	PRESERVATIVE PAINT CO	SEATTLE	GLYCOL ETHERS	17	0	0	17	0	0
			TOLUENE	30	0	0	30	0	3,100
			XYLENE (MIXED ISOMERS)	35	0	0	35	0	12,500

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for:	PRESERVATIVE PAINT CO		82	0	0	82	0	15,600
	PROLER RECYCLING INC	SEATTLE	NITRATE COMPOUNDS	0	0	0	0	0	0
	SEATTLE		SODIUM NITRITE	0	0	0	0	0	0
	Total for:	PROLER RECYCLING INC SEATTLE		0	0	0	0	0	0
	PROTECTIVE COATINGS, INC	KENT	1,1,1-TRICHLOROETHANE	200	0	5	205	5	1,150
			METHYL ETHYL KETONE	11,000	0	5	11,005	5	8,000
			NITRIC ACID	1,000	0	5	1,005	250	0
			TOLUENE	5,494	0	5	5,499	5	1,800
			TRICHLOROETHYLENE	9,925	0	5	9,930	5	3,250
			XYLENE (MIXED ISOMERS)	3,960	0	5	3,965	5	720
	Total for:	PROTECTIVE COATINGS, INC		31,579	0	30	31,609	275	14,920
	PUGET SOUND COATINGS	SEATTLE	METHYL ETHYL KETONE	18,004	0	0	18,004	0	500
			XYLENE (MIXED ISOMERS)	21,769	0	0	21,769	0	500
	Total for:	PUGET SOUND COATINGS INC		39,773	0	0	39,773	0	1,000
	RED DOT CORP	SEATTLE	METHYL ETHYL KETONE	13,266	0	0	13,266	0	0
			TRICHLOROETHYLENE	33,000	0	0	33,000	0	0
	Total for:	RED DOT CORP		46,266	0	0	46,266	0	0
	REYNOLDS METALS CO.	KENT	GLYCOL ETHERS	141,478	0	0	141,478	0	331
			HYDROGEN FLUORIDE	76	0	0	76	0	0
			MANGANESE	0	0	0	0	7	91,572
			N-BUTYL ALCOHOL	119,394	0	0	119,394	0	136
			SULFURIC ACID	299	0	0	299	0	0
	Total for:	REYNOLDS METALS CO.		261,247	0	0	261,247	7	92,039
	ROMAC INDUSTRIES, INC	SEATTLE	CHROMIUM	1	0	0	1	41	0
			MANGANESE	7	0	0	7	0	0
			NICKEL	3	0	0	3	20	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: ROMAC INDUSTRIES, INC			11	0	0	11	61	0
	RUDD CO INC	SEATTLE	DI(2-ETHYLHEXYL) PHTHALATE (DEHP)	1,000	0	0	1,000	0	500
			ETHYLBENZENE	1,000	0	0	1,000	0	750
			GLYCOL ETHERS	1,000	0	0	1,000	0	500
			METHANOL	1,550	0	0	1,550	0	750
			METHYL ETHYL KETONE	1,550	0	0	1,550	0	750
			METHYL ISOBUTYL KETONE	4,650	0	0	4,650	0	1,000
			N-BUTYLALCOHOL	3,250	0	0	3,250	0	750
			N-HEXANE	500	0	0	500	0	500
			TOLUENE	7,150	0	0	7,150	0	5,700
			XYLENE (MIXED ISOMERS)	4,150	0	0	4,150	0	1,750
	Total for: RUDD CO INC			25,800	0	0	25,800	0	12,950
	SAFEWAY BEVERAGE PLANT	BELLEVUE	PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: SAFEWAY BEVERAGE PLANT			0	0	0	0	0	0
	SCOTT GALVANIZING CO INC	SEATTLE	ZINC COMPOUNDS	0	0	0	0	0	268,490
	Total for: SCOTT GALVANIZING CO INC			0	0	0	0	0	268,490
	SEAFAB METAL CORP	SEATTLE	ANTIMONY COMPOUNDS	0	0	0	0	0	0
			LEAD COMPOUNDS	1,448	0	0	1,448	33	0
	Total for: SEAFAB METAL CORP			1,448	0	0	1,448	33	0
	STARROW ENTERPRISES	AUBURN	STYRENE	0	0	0	0	5	0
	Total for: STARROW ENTERPRISES			0	0	0	0	5	0
	SUN SPORTSWEAR INC	KENT	XYLENE (MIXED ISOMERS)	24,400	0	0	24,400	0	8,164
	Total for: SUN SPORTSWEAR INC			24,400	0	0	24,400	0	8,164
	TEMPRESS INC	SEATTLE	DICHLOROMETHANE	19,606	0	0	19,606	0	5,701
			DIISOCYANATES	0	0	0	0	0	0
	Total for: TEMPRESS INC			19,606	0	0	19,606	0	5,701

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	THE STROH BREWERY CO	SEATTLE	PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: THE STROH BREWERY CO			0	0	0	0	0	0
	TODD PACIFIC SHIPYARDS CORP	SEATTLE	COPPER COMPOUNDS	58,451	0	500	58,951	5	11,168
			N-BUTYLALCOHOL	6,738	0	0	6,738	0	5,584
			XYLENE (MIXED ISOMERS)	23,162	0	0	23,162	0	22,334
			ZINC (FUME OR DUST)	30,159	0	500	30,659	5	9,916
	Total for: TODD PACIFIC SHIPYARDS CORP			118,510	0	1,000	119,510	10	49,002
	VIOX CORPORATION	SEATTLE	LEAD COMPOUNDS	105	0	0	105	1	51,963
	Total for: VIOX CORPORATION			105	0	0	105	1	51,963
	WASSER HIGH TECH COATINGS	KENT	METHYL ISOBUTYL KETONE	1,920	0	0	1,920	0	3,260
			XYLENE (MIXED ISOMERS)	2,400	0	0	2,400	0	3,260
			ZINC (FUME OR DUST)	3,800	0	0	3,800	0	3,260
	Total for: WASSER HIGH TECH COATINGS			8,120	0	0	8,120	0	9,780
	WESCOR GRAPHICS CORP	SEATTLE	N-BUTYLALCOHOL	0	0	0	0	0	2,032
			TETRACHLOROETHYLENE	0	0	0	0	0	11,517
	Total for: WESCOR GRAPHICS CORP			0	0	0	0	0	13,549
	WESTERN PNEUMATIC TUBE CO	KIRKLAND	HYDROGEN FLUORIDE	0	0	0	0	0	0
			NITRIC ACID	0	0	0	0	0	0
			TRICHLOROETHYLENE	46,424	0	0	46,424	0	2,516
	Total for: WESTERN PNEUMATIC TUBE CO			46,424	0	0	46,424	0	2,516
	County Total for	KING		2,465,676	893	1,030	2,467,599	169,997	8,886,214
KITSAP									
	PUGET SOUND NAVAL SHIPYARD	BREMERTON	CHROMIUM	500	0	0	500	0	0
			COPPER	1,950	0	0	1,950	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	PUGET SOUND NAVAL SHIPYARD	BREMERTON	LEAD	500	0	0	500	0	0
			NICKEL	2,850	0	0	2,850	5	0
			ZINC COMPOUNDS	750	0	0	750	0	0
	Total for: PUGET SOUND NAVAL SHIPYARD			6,550	0	0	6,550	5	0
	US NAVY BANGOR SUBMARINE BASE	SILVERDALE	DICHLORODIFLUOROMETHANE	0	0	0	0	0	53,550
			DICHLOROTETRA-FLUOROETHANE	0	0	0	0	0	122,450
			XYLENE (MIXED ISOMERS)	7,146	0	0	7,146	0	10,288
	Total for: US NAVY BANGOR SUBMARINE BASE			7,146	0	0	7,146	0	186,288
	County Total for	KITSAP		13,696	0	0	13,696	5	186,288
KLICKITAT									
	GOLDENDALE ALUMINUM CO.	GOLDENDALE	CARBONYL SULFIDE	94,000	0	0	94,000	0	0
			CHLORINE	1,588	0	0	1,588	0	0
			CHROMIUM	0	0	0	0	0	0
			COPPER	0	0	0	0	0	0
			HYDROGEN FLUORIDE	25,000	0	0	25,000	0	0
			MANGANESE	0	0	0	0	0	0
	Total for: GOLDENDALE ALUMINUM CO.			120,588	0	0	120,588	0	0
	County Total for	KLICKITAT		120,588	0	0	120,588	0	0
LEWIS									
	DARIGOLD - CHEHALIS	CHEHALIS	NITRIC ACID	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: DARIGOLD - CHEHALIS			0	0	0	0	0	0
	FOSECO INC CHEHALIS	CHEHALIS	ALUMINUM	482	0	0	482	0	2
			COPPER COMPOUNDS	18	0	0	18	0	0
	Total for: FOSECO INC CHEHALIS			500	0	0	500	0	2

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	QUALI-CAST FOUNDRY INC	CHEHALIS	CHROMIUM	5	0	0	5	0	0
			NICKEL	5	0	0	5	0	0
	Total for: QUALI-CAST FOUNDRY INC			10	0	0	10	0	0
	County Total for	LEWIS		510	0	0	510	0	2
PEND OREILLE									
	PONDERAY NEWSPRINT CO	USK	AMMONIA	0	0	520	520	0	0
			NITRATE COMPOUNDS	0	0	74,000	74,000	0	0
	Total for: PONDERAY NEWSPRINT CO			0	0	74,520	74,520	0	0
	County Total for	PEND OREILLE	0	0	74,520	74,520	0	0	
PIERCE									
	AMERICAN REINFORCED PLASTICS	TACOMA	STYRENE	13,036	0	0	13,036	5	0
	Total for: AMERICAN REINFORCED PLASTICS			13,036	0	0	13,036	5	0
	ATLAS FOUNDRY & MACHINE	TACOMA	CHROMIUM	500	250	5	755	250	250
			COPPER	10	5	250	265	250	250
			MANGANESE	10	250	0	260	0	250
			MOLYBDENUM TRIOXIDE	10	250	5	265	0	250
		NICKEL	10	5	5	20	0	250	
	Total for: ATLAS FOUNDRY & MACHINE			540	760	265	1,565	500	1,250
	BCAG Fabrication Division-Fred	Puyallup	COPPER	0	0	0	0	70	97,622
			METHYL ETHYL KETONE	10,050	0	0	10,050	0	7,168
			NITRIC ACID	0	0	0	0	0	270,011
			TOLUENE	14,180	0	0	14,180	0	478
	Total for: BCAG Fabrication Division-Fred			24,230	0	0	24,230	70	375,279
	BEATRICE CHEESE INC	SUMNER	NITRIC ACID	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	0	0	0	0	0	0
	Total for: BEATRICE CHEESE INC			0	0	0	0	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	DURHAM COMPRESSION MOLDING	TACOMA	DIISOCYANATES	0	0	0	0	0	0
	Total for: DURHAM COMPRESSION MOLDING			0	0	0	0	0	0
	DYNO OVERLAYS	TACOMA	FORMALDEHYDE	2,897	0	0	2,897	0	0
			METHANOL	56,439	0	0	56,439	0	0
			PHENOL	4,628	0	0	4,628	0	1,000
	Total for: DYNO OVERLAYS			63,964	0	0	63,964	0	1,000
	ELF ATOCHEM NORTH AMERICA TACOMA	TACOMA	CHLORINE	631	0	11	642	0	0
	Total for: ELF ATOCHEM NORTH AMERICA			631	0	11	642	0	0
	GENERAL PLASTICS	TACOMA	DICHLOROMETHANE	24,421	0	0	24,421	0	1,000
			DIISOCYANATES	5	0	0	5	0	0
	Total for: GENERAL PLASTICS			24,426	0	0	24,426	0	1,000
	GIRARD CUSTOM COATERS INC	TACOMA	ETHYLBENZENE	14,000	0	0	14,000	0	1,512
			TOLUENE	18,598	0	0	18,598	0	2,182
			XYLENE (MIXED ISOMERS)	90,553	0	0	90,553	0	9,782
	Total for: GIRARD CUSTOM COATERS INC			123,151	0	0	123,151	0	13,476
	I CORP AND FORT LEWIS	FORT LEWIS	ETHYLENE GLYCOL	79	140	617	836	0	67,475
			TOLUENE	9,715	1	0	9,716	0	2,140
			XYLENE (MIXED ISOMERS)	9,363	0	0	9,363	0	3,574
	Total for: I CORP AND FORT LEWIS			19,157	141	617	19,915	0	73,189
	JONES CHEMICALS	TACOMA	CHLORINE	3	0	0	3	0	0
	Total for: JONES CHEMICALS			3	0	0	3	0	0
	KAISER ALUMINUM	TACOMA	CARBONYL SULFIDE	178,000	0	0	178,000	0	0
			COPPER	861	0	10	871	0	120,000
			HYDROGEN FLUORIDE	120,810	0	0	120,810	0	0
			LITHIUM CARBONATE	631	0	5	636	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	KAISER ALUMINUM	TACOMA	POLYCYCLIC AROMATIC COMPOUNDS	5,070	0	2	5,072	0	2,000
	Total for: KAISER ALUMINUM			305,372	0	17	305,389	0	122,000
	KYSOR KALT MFG CO	PUYALLUP	CHLORODIFLUOROMETHANE	0	0	0	0	0	0
			DIISOCYANATES	0	0	0	0	0	0
	Total for: KYSOR KALT MFG CO			0	0	0	0	0	0
	LIANGA PACIFIC, INC.	TACOMA	METHANOL	12,269	0	0	12,269	0	250
			TOLUENE	19,905	0	0	19,905	0	750
			XYLENE (MIXED ISOMERS)	11,764	0	0	11,764	0	250
	Total for: LIANGA PACIFIC, INC.			43,938	0	0	43,938	0	1,250
	MATSUSHTA SEMICONDUCTOR CORP	PUYALLUP	HYDROGEN FLUORIDE	3,100	0	0	3,100	0	250
			NITRIC ACID	374	0	0	374	0	250
			PHOSPHORIC ACID	39	0	0	39	0	5
			SULFURIC ACID	59	0	0	59	0	2,850
	Total for: MATSUSHTA SEMICONDUCTOR			3,572	0	0	3,572	0	3,355
	NALLEY'S FINE FOODS INC	TACOMA	AMMONIA	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: NALLEY'S FINE FOODS INC			0	0	0	0	0	0
	NORCORE PLASTICS	TACOMA	ETHYLENE GLYCOL	9,472	0	0	9,472	0	0
			STYRENE	12,499	0	0	12,499	0	0
	Total for: NORCORE PLASTICS			21,971	0	0	21,971	0	0
	NORTHCOAST YACHTS INC	TACOMA	STYRENE	4,500	0	0	4,500	0	0
	Total for: NORTHCOAST YACHTS INC			4,500	0	0	4,500	0	0
	NORTHWEST ETCH TECHNOLOGY INC	TACOMA	COPPER	0	0	0	0	0	11,700
			HYDROCHLORIC ACID	0	0	0	0	0	1,500
	Total for: NORTHWEST ETCH TECHNOLOGY			0	0	0	0	0	13,200

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	OCC TACOMA, INC.	TACOMA	ASBESTOS (FRIABLE)	1	0	0	1	0	75
			CHLORINE	303	0	0	303	0	3
			DICHLORODIFLUOROMETHANE	27,163	37	0	27,200	0	6,837
			HYDROCHLORIC ACID	275	0	0	275	0	0
	Total for: OCC TACOMA, INC.			27,742	37	0	27,779	0	6,915
	PACE INDUSTRIES PUGET DIVISION	TACOMA	COPPER	183	0	0	183	1	11,350
	Total for: PACE INDUSTRIES PUGET DIVISION			183	0	0	183	1	11,350
	PARKER PAINT MFG. CO. INC.	TACOMA	ETHYLENE GLYCOL	2,205	0	0	2,205	0	27,520
			TOLUENE	797	0	0	797	0	1,355
			XYLENE (MIXED ISOMERS)	4,131	0	0	4,131	0	1,355
	Total for: PARKER PAINT MFG. CO. INC.			7,133	0	0	7,133	0	30,230
	SIMPSON TACOMA KRAFT	TACOMA	ACETALDEHYDE	36,004	0	12,000	48,004	0	0
			AMMONIA	69,500	0	27,000	96,500	0	0
			CATECHOL	0	0	60	60	0	0
			CHLORINE	585	0	0	585	0	0
			CHLORINE DIOXIDE	7,600	0	0	7,600	0	0
			CHLOROFORM	25,000	0	3,700	28,700	0	0
			CRESOL (MIXED ISOMERS)	34,000	0	100	34,100	0	0
			FORMIC ACID	0	0	0	0	0	0
			GLYCOL ETHERS	1,400	0	940	2,340	0	0
			HYDROCHLORIC ACID	43,000	0	0	43,000	0	0
			METHANOL	565,100	0	0	565,100	0	0
			NITRIC ACID	0	0	0	0	0	0
			PHENOL	17,900	0	306	18,206	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	40,800	0	0	40,800	0	0
	Total for: SIMPSON TACOMA KRAFT CO.			840,889	0	44,106	884,995	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	STONE CONSOLIDATED CORP W TACOMA	STEILACOOM	METHANOL	10,000	0	0	10,000	0	0
	Total for: STONE CONSOLIDATED CORP W			10,000	0	0	10,000	0	0
	SUPERIOR WOOD TREATING	SUMNER	ARSENIC	10	0	5	15	0	1,000
			CHROMIUM	10	0	5	15	0	1,000
			COPPER	10	0	5	15	0	500
	Total for: SUPERIOR WOOD TREATING			30	0	15	45	0	2,500
	T. C. PRODUCTS INC.	TACOMA	CHLORINE	20	0	0	20	0	0
	Total for: T. C. PRODUCTS INC.			20	0	0	20	0	0
	TACOMA FIXTURE	TACOMA	METHYL ISOBUTYL KETONE	17,935	0	0	17,935	0	359
			TOLUENE	23,016	0	0	23,016	0	2,946
			XYLENE (MIXED ISOMERS)	13,677	0	0	13,677	0	1,504
	Total for: TACOMA FIXTURE COMPANY			54,628	0	0	54,628	0	4,809
	TORAY COMPOSITES (AMERICA)	TACOMA	METHANOL	4,233	0	0	4,233	0	54,819
			METHYL ETHYL KETONE	18,429	0	0	18,429	0	78,976
			N-METHYL-2-PYRROLIDONE	1,554	0	0	1,554	0	124,291
			TOLUENE	8,915	0	0	8,915	0	119,891
	Total for: TORAY COMPOSITES (AMERICA)			33,131	0	0	33,131	0	377,977
	U.S OIL & REFINING CO.	TACOMA	AMMONIA	0	0	0	0	0	0
			BENZENE	9,120	0	0	9,120	0	20
			ETHYLBENZENE	4,400	0	0	4,400	0	0
			GLYCOL ETHERS	0	0	0	0	0	0
			TOLUENE	22,627	0	0	22,627	0	0
			XYLENE (MIXED ISOMERS)	25,635	0	0	25,635	0	0
	Total for: U.S OIL & REFINING CO.			61,782	0	0	61,782	0	20
	WESTMARK PRODUCTS, INC.	TACOMA	TOLUENE	11,552	0	0	11,552	0	270

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: WESTMARK PRODUCTS, INC.			11,552	0	0	11,552	0	270
	County Total for	PIERCE		1,695,581	938	45,031	1,741,550	576	1,039,070
SKAGIT									
	FIBREX CORP	BURLINGTON	STYRENE	3,896	0	0	3,896	0	0
	Total for: FIBREX CORP			3,896	0	0	3,896	0	0
	GENERAL CHEMICAL CORP ANACORTES	ANACORTES	SULFURIC ACID	12,920	0	0	12,920	0	0
	Total for: GENERAL CHEMICAL CORP			12,920	0	0	12,920	0	0
	HALLMARK REFINING CORP MT VERNON	MT VERNON	SILVER	0	0	0	0	0	833,444
	Total for: HALLMARK REFINING CORP MT			0	0	0	0	0	833,444
	MARCH POINT COGENERATION CO.	ANACORTES	1,3-BUTADIENE	6	0	0	6	0	0
			AMMONIA	1,036	0	0	1,036	0	0
			ETHYLENE	2,127	0	0	2,127	0	0
			PROPYLENE	820	0	0	820	0	0
	Total for: MARCH POINT COGENERATION CO.			3,989	0	0	3,989	0	0
	SHELL ANACORTES REFINING COMPANY	ANACORTES	1,2,4-TRIMETHYLBENZENE	2,100	0	0	2,100	0	2
			1,3-BUTADIENE	40	0	0	40	0	0
			AMMONIA	1,250	680	620	2,550	0	0
			ANTIMONY COMPOUNDS	500	230	8,700	9,430	0	5,213
			BENZENE	17,400	0	0	17,400	0	80
			CHLORINE	2,900	0	0	2,900	0	0
			CYCLOHEXANE	26,000	0	0	26,000	0	50
			DIETHANOLAMINE	500	0	0	500	0	0
			ETHYLBENZENE	18,400	0	0	18,400	0	74
			ETHYLENE	5,300	0	0	5,300	0	0
			HYDROCHLORIC ACID	41	0	0	41	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	SHELL ANACORTES REFINING COMPANY	ANACORTES	METHANOL	500	0	0	500	0	0
			METHYL TERT-BUTYLETHER	1,400	0	0	1,400	0	0
			MOLYBDENUM TRIOXIDE	0	0	0	0	0	0
			N-HEXANE	42,000	0	0	42,000	0	550
			NAPHTHALENE	2,100	0	0	2,100	0	302
			NICKEL COMPOUNDS	3,500	60	0	3,560	0	10,650
			POLYCYCLIC AROMATIC COMPOUNDS	225	0	0	225	0	61
			PROPYLENE	12,600	0	0	12,600	0	0
			TETRACHLOROETHYLENE	3,512	0	0	3,512	0	7
			TOLUENE	60,000	0	0	60,000	0	246
			XYLENE (MIXED ISOMERS)	65,000	0	0	65,000	0	12
	Total for: SHELL ANACORTES REFINING			265,268	970	9,320	275,558	0	17,247
	TECNAL CORPORATION	ANACORTES	PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: TECNAL CORPORATION			0	0	0	0	0	0
	TRMI PUGET SOUND PLANT	ANACORTES	1,2,4-TRIMETHYLBENZENE	1,310	0	0	1,310	0	0
			AMMONIA	1,634	0	10,215	11,849	0	0
			BENZENE	5,743	10	0	5,753	0	200
			CHLORINE	6,114	0	2,632	8,746	0	0
			CYCLOHEXANE	1,794	0	0	1,794	0	0
			ETHYLBENZENE	1,774	13	0	1,787	0	419
			ETHYLENE	37,365	0	0	37,365	0	0
			METHANOL	10	0	0	10	0	0
			MOLYBDENUM TRIOXIDE	0	0	0	0	0	146,695
			N-HEXANE	9,277	0	0	9,277	0	0
			NAPHTHALENE	5	1	0	6	0	406
			PHENOL	0	0	331	331	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	TRMI PUGET SOUND PLANT	ANACORTES	POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	28
			PROPYLENE	23,302	0	0	23,302	0	0
			TETRACHLOROETHYLENE	10	0	0	10	0	1
			TOLUENE	10,383	3,066	0	13,449	0	1,407
			XYLENE (MIXED ISOMERS)	11,407	149	0	11,556	0	3,140
	Total for: TRMI PUGET SOUND PLANT			110,128	3,239	13,178	126,545	0	152,296
	County Total for SKAGIT			396,201	4,209	22,498	422,908	0	1,002,987
SNOHOMISH									
	ACHILLES USA	EVERETT	DI(2-ETHYLHEXYL) PHTHALATE (DEHP)	2,707	0	0	2,707	0	0
	Total for: ACHILLES USA			2,707	0	0	2,707	0	0
	AMERICAN BOILER WORKS, INC.	EVERETT	METHYL ETHYL KETONE	6,880	0	0	6,880	0	500
	Total for: AMERICAN BOILER WORKS, INC.			6,880	0	0	6,880	0	500
	AMERON INTERNATIONAL POLE PROD DIV	EVERETT	TOLUENE	14,644	0	0	14,644	0	0
	Total for: AMERON INTERNATIONAL POLE			14,644	0	0	14,644	0	0
	BFGOODRICH AEROSPACE/TRAMCO	EVERETT	METHYL ETHYL KETONE	47,800	0	0	47,800	5	42,600
			TOLUENE	4,100	0	0	4,100	5	14,600
	Total for: BFGOODRICH AEROSPACE/TRAMCO			51,900	0	0	51,900	10	57,200
	BOEING COMMERCIAL AIRPLANE GRO	EVERETT	1,1,1-TRICHLOROETHANE	95,600	0	0	95,600	0	19,308
			AMMONIA	12,200	0	0	12,200	0	0
			CHROMIUM COMPOUNDS	316	0	255	571	5	206,058
			COPPER COMPOUNDS	25	0	500	525	13	41,300
			FREON 113	33,000	0	0	33,000	0	190
			GLYCOL ETHERS	8,670	0	0	8,670	0	14,933
			MANGANESE COMPOUNDS	10	0	0	10	0	23,131

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	BOEING COMMERCIAL AIRPLANE GRO	EVERETT	METHANOL	16,600	0	0	16,600	0	192
			METHYL ETHYL KETONE	400,000	0	500	400,500	3,800	141,850
			NITRATE COMPOUNDS	0	0	0	0	18,000	22,000
			TOLUENE	200,000	0	255	200,255	5	31,760
			XYLENE (MIXED ISOMERS)	16,600	0	50	16,650	0	2,500
	Total for: BOEING COMMERCIAL AIRPLANE			783,021	0	1,560	784,581	21,823	503,222
	CALVERT INDUSTRIES INC	SNOHOMISH	METHYL ETHYL KETONE	14,531	0	0	14,531	0	368
			XYLENE (MIXED ISOMERS)	27,311	0	0	27,311	0	55
	Total for: CALVERT INDUSTRIES INC			41,842	0	0	41,842	0	423
	CANYON CREEK CASCADE	WOODINVILLE	TOLUENE	31,140	0	0	31,140	0	2,244
	CABINET CO	XYLENE (MIXED ISOMERS)		16,877	0	0	16,877	0	2,244
	Total for: CANYON CREEK CASCADE CABINET			48,017	0	0	48,017	0	4,488
	CHEVRON PRODUCTS COMPANY	SEATTLE	1,2,4-TRIMETHYLBENZENE	215	0	0	215	0	0
			BENZENE	2,551	0	280	2,831	0	0
			CUMENE	86	0	0	86	0	0
			CYCLOHEXANE	1,020	0	280	1,300	0	0
			ETHYLBENZENE	330	0	0	330	0	0
			METHYL TERT-BUTYL ETHER	8,725	0	0	8,725	0	0
			N-HEXANE	11,574	0	559	12,133	0	0
			TOLUENE	1,786	0	80	1,866	0	0
			XYLENE (MIXED ISOMERS)	1,034	0	98	1,132	0	0
	Total for: CHEVRON PRODUCTS COMPANY			27,321	0	1,297	28,618	0	0
	COOK COMPOSITES & POLYMERS	ARLINGTON	METHYL METHACRYLATE	1,332	0	0	1,332	0	435
			STYRENE	500	0	0	500	0	2,610

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for:	COOK COMPOSITES & POLYMERS		1,832	0	0	1,832	0	3,045
	CREST CABINET	EVERETT	TOLUENE	18,385	0	0	18,385	0	1,155
	Total for:	CREST CABINET		18,385	0	0	18,385	0	1,155
	FLUKE CORPORATION	EVERETT	AMMONIA	12	0	0	12	250	17,441
			COPPER COMPOUNDS	0	0	0	0	245	4,612
			NITRIC ACID	38	0	0	38	0	0
	Total for:	FLUKE CORPORATION		50	0	0	50	495	22,053
	J.H. BAXTER & CO.	ARLINGTON	PENTACHLOROPHENOL	500	0	0	500	0	755
	Total for:	J.H. BAXTER & CO.		500	0	0	500	0	755
	KIMBERLY-CLARK TISSUE COMPANY	EVERETT	AMMONIA	43,330	0	41,000	84,330	0	0
			CHLORINE	1,000	0	0	1,000	0	0
			CHLOROFORM	97,000	0	10,900	107,900	0	0
			FORMIC ACID	0	0	0	0	0	0
			METHANOL	58,000	0	21,000	79,000	0	5
			NITRATE COMPOUNDS	0	0	340,000	340,000	0	5
			PHOSPHORIC ACID	0	0	0	0	0	250
			VINYL ACETATE	2,900	0	650	3,550	0	0
	Total for:	KIMBERLY-CLARK TISSUE		202,230	0	413,550	615,780	0	260
	NORTHWEST COMPOSITES, INC.	MARYSVILLE	METHYL ETHYL KETONE	1,442	0	0	1,442	0	7,039
	Total for:	NORTHWEST COMPOSITES, INC.		1,442	0	0	1,442	0	7,039
	OLYMPIC BOATS CO	MONROE	STYRENE	2,288	0	0	2,288	0	0
	Total for:	OLYMPIC BOATS CO		2,288	0	0	2,288	0	0
	PACIFIC GRINDING WHEEL CO INC	MARYSVILLE	CREOSOTE	0	0	0	0	0	250
	Total for:	PACIFIC GRINDING WHEEL CO INC		0	0	0	0	0	250
	R REYNOLDS CORP	LYNNWOOD	STYRENE	4,574	0	0	4,574	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: R REYNOLDS CORP			4,574	0	0	4,574	0	0
	TIZ'S DOOR SALES INC.	EVERETT	METHYL ISOBUTYL KETONE	20,793	0	0	20,793	0	250
			TOLUENE	16,768	0	0	16,768	0	250
			XYLENE (MIXED ISOMERS)	13,055	0	0	13,055	0	250
	Total for: TIZ'S DOOR SALES INC.			50,616	0	0	50,616	0	750
	US MARINE/BAYLINER MARINE	ARLINGTON	STYRENE	99,580	0	0	99,580	0	0
	Total for: US MARINE/BAYLINER MARINE			99,580	0	0	99,580	0	0
	County Total for SNOHOMISH			1,357,829	0	416,407	1,774,236	22,328	601,140
SPOKANE									
	ADM ANIMAL HEALTH & NUTRITION	SPOKANE	COPPER COMPOUNDS	1	0	0	1	0	359
			MANGANESE COMPOUNDS	4	0	0	4	0	1,272
			SELENIUM COMPOUNDS	1	0	0	1	0	7
			ZINC COMPOUNDS	6	0	0	6	0	1,989
	Total for: ADM ANIMAL HEALTH & NUTRITION			12	0	0	12	0	3,627
	ALLOY TRAILERS INC GEIGER BLVD	SPOKANE	CHLORODIFLUORO- METHANEDIISOCYANATES	1,161	0	0	1,161	0	0
			XYLENE (MIXED ISOMERS)	5	0	0	5	0	0
			XYLENE (MIXED ISOMERS)	5,621	0	0	5,621	0	10,075
	Total for: ALLOY TRAILERS INC GEIGER BLVD			6,787	0	0	6,787	0	10,075
	ALLOY TRAILERS INC SIP	SPOKANE	MANGANESE	3	0	0	3	0	0
			TOLUENE	5,907	0	0	5,907	0	0
			XYLENE (MIXED ISOMERS)	37,685	0	0	37,685	0	16,120
	Total for: ALLOY TRAILERS INC SIP			43,595	0	0	43,595	0	16,120
	APOLLO PLASTICS	SPOKANE	STYRENE	9,806	0	0	9,806	0	0
	Total for: APOLLO PLASTICS			9,806	0	0	9,806	0	0
	COLUMBIA LIGHTING INC	SPOKANE	ETHYLBENZENE	15,048	0	0	15,048	0	1,642

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	COLUMBIA LIGHTING INC	SPOKANE	TOLUENE	51,204	0	0	51,204	0	1,642
			XYLENE (MIXED ISOMERS)	55,520	0	0	55,520	0	16,422
	Total for: COLUMBIA LIGHTING INC			121,772	0	0	121,772	0	19,706
	COLUMBIA PAINT & COATINGS	SPOKANE	ETHYLENE GLYCOL	500	0	0	500	250	5
			TOLUENE	1,000	0	0	1,000	0	0
			XYLENE (MIXED ISOMERS)	500	0	0	500	0	0
	Total for: COLUMBIA PAINT & COATINGS			2,000	0	0	2,000	250	5
	DARIGOLD - SPOKANE	SPOKANE	PHOSPHORIC ACID	0	0	0	0	12,221	0
	Total for: DARIGOLD - SPOKANE			0	0	0	0	12,221	0
	HUNTWOOD INDUSTRIES	SPOKANE	ETHYLBENZENE	18,837	0	0	18,837	0	3,107
			FORMALDEHYDE	1,114	0	0	1,114	0	5
			TOLUENE	97,962	0	0	97,962	0	13,592
			XYLENE (MIXED ISOMERS)	81,115	0	0	81,115	0	4,660
	Total for: HUNTWOOD INDUSTRIES			199,028	0	0	199,028	0	21,364
	JOHNSON MATTHEY ELECTRONICS	SPOKANE	COPPER	5	0	0	5	5	41,931
			DICHLOROMETHANE	23,100	0	0	23,100	0	3,800
			LEAD	10	0	0	10	5	15,255
			N-HEXANE	7,000	0	0	7,000	0	4,500
			NICKEL COMPOUNDS	10	0	0	10	250	11,236
	Total for: JOHNSON MATTHEY ELECTRONICS			30,125	0	0	30,125	260	76,722
	KAISER ALUMINUM & CHEMICAL CO	SPOKANE	CHLORINE	201,070	0	0	201,070	0	0
			CHROMIUM	62	0	91	153	0	127
			COPPER	78	0	15	93	0	307
			GLYCOL ETHERS	524	0	0	524	0	5,574
			HYDROCHLORIC ACID	160,650	0	0	160,650	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	KAISER ALUMINUM & CHEMICAL COR	SPOKANE	MANGANESE	210	0	11	221	0	226
			METHYL ETHYL KETONE	3,509	0	0	3,509	0	404,169
			METHYL ISOBUTYL KETONE	890	0	0	890	0	11,147
			PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	0	0	0	0	0	0
			TOLUENE	3,394	0	0	3,394	0	72,461
			XYLENE (MIXED ISOMERS)	1,549	0	0	1,549	0	12,372
	Total for: KAISER ALUMINUM & CHEMICAL			371,936	0	117	372,053	0	506,383
	KAISER MEAD WORKS	MEAD	CARBONYL SULFIDE	518,000	0	0	518,000	0	0
			COPPER	500	0	250	750	0	941,131
			HYDROGEN FLUORIDE	744,000	0	0	744,000	0	0
			LITHIUM CARBONATE	255	0	250	505	0	0
			POLYCYCLIC AROMATIC COMPOUNDS	1,000	250	0	1,250	0	250
	Total for: KAISER MEAD WORKS			1,263,755	250	500	1,264,505	0	941,381
	MELCHER MFG CO	SPOKANE	STYRENE	14,860	0	0	14,860	0	0
	Total for: MELCHER MFG CO			14,860	0	0	14,860	0	0
	MUTUAL MATERIALS CO MICA BRICK PLANT	MICA	HYDROGEN FLUORIDE	59,910	0	0	59,910	0	0
	Total for: MUTUAL MATERIALS CO MICA			59,910	0	0	59,910	0	0
	OLYMPIC FOODS	SPOKANE	PHOSPHORIC ACID	0	0	0	0	17,670	0
	Total for: OLYMPIC FOODS			0	0	0	0	17,670	0
	PEPSI-COLA BOTTLING CO SPOKANE	SPOKANE	PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: PEPSI-COLA BOTTLING CO SPOKANE			0	0	0	0	0	0
	SPOKANE GALVANIZING,	AIRWAY	SULFURIC ACID	585	0	0	585	0	0
			ZINC (FUME OR DUST)	656	0	0	656	0	160,515

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for:	SPOKANE GALVANIZING, INC.		1,241	0	0	1,241	0	160,515
	SPOKANE METAL PRODUCTS	SPOKANE	CHROMIUM	5	0	0	5	0	5,200
			NICKEL	5	0	0	5	0	2,700
	Total for:	SPOKANE METAL PRODUCTS		10	0	0	10	0	7,900
	SPOKANE STEEL FOUNDRY	SPOKANE	CHROMIUM	10	0	0	10	0	5
			MANGANESE	255	0	0	255	0	5,900
	Total for:	SPOKANE STEEL FOUNDRY		265	0	0	265	0	5,905
	TRAVIS PATTERN & FOUNDRY INC	SPOKANE	COPPER	0	0	0	0	0	0
			TRICHLOROETHYLENE	8,619	0	0	8,619	0	1,221
	Total for:	TRAVIS PATTERN & FOUNDRY INC		8,619	0	0	8,619	0	1,221
	U S MARINE	SPOKANE	DICHLOROMETHANE	53,129	0	0	53,129	0	0
			STYRENE	118,216	0	0	118,216	0	0
	Total for:	U S MARINE		171,345	0	0	171,345	0	0
	UNITED PAINT MANUFACTURING COM	GREENACRES	DIISOCYANATES	0	0	0	0	0	600
			ETHYLBENZENE	1,300	0	0	1,300	0	300
			XYLENE (MIXED ISOMERS)	4,400	0	0	4,400	0	800
	Total for:	UNITED PAINT MANUFACTURING		5,700	0	0	5,700	0	1,700
	County Total for	SPOKANE		2,310,766	250	617	2,311,633	30,401	1,772,624
STEVENS									
	ALADDIN STEEL PRODUCTS	COLVILLE	TOLUENE	15,467	0	0	15,467	0	0
	Total for:	ALADDIN STEEL PRODUCTS		15,467	0	0	15,467	0	0
	NORTHWEST ALLOYS, INC	ADDY	AMMONIA	31,799	0	0	31,799	0	0
			COPPER	193	0	0	193	0	0
			HYDROCHLORIC ACID	15,122	0	0	15,122	0	0
	Total for:	NORTHWEST ALLOYS, INC		47,114	0	0	47,114	0	0
	County Total for	STEVENS		62,581	0	0	62,581	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
THURSTON									
	AMTECH CORP	YELM	STYRENE	32,000	0	0	32,000	0	3,664
	Total for: AMTECH CORP			32,000	0	0	32,000	0	3,664
	CROWN BEVERAGE PACKAGING	OLYMPIA	GLYCOL ETHERS	76,906	0	0	76,906	0	0
			HYDROGEN FLUORIDE	0	0	0	0	0	0
			MANGANESE COMPOUNDS	0	0	0	0	5	500
			N-BUTYLALCOHOL	120,789	0	0	120,789	0	0
			N-HEXANE	92,103	0	0	92,103	0	0
	Total for: CROWN BEVERAGE PACKAGING			289,798	0	0	289,798	5	500
	OLYMPIA CHEESE CO	LACEY	NITRIC ACID	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: OLYMPIA CHEESE CO			0	0	0	0	0	0
	THOMKINS INDUSTRIES LASCO BATHWARE	YELM	STYRENE	237,529	0	0	237,529	0	0
	Total for: THOMKINS INDUSTRIES LASCO			237,529	0	0	237,529	0	0
	County Total for THURSTON			559,327	0	0	559,327	5	4,164
WALLA									
	BOISE CASCADE PAPER DIVISION	WALLULA	ACETALDEHYDE	26,400	0	1,550	27,950	0	0
			AMMONIA	63,500	0	13,000	76,500	0	0
			CATECHOL	0	0	57	57	0	0
			CHLORINE	3,280	0	0	3,280	0	0
			CHLORINE DIOXIDE	3,900	0	0	3,900	0	0
			FORMIC ACID	0	0	0	0	0	0
			HYDROCHLORIC ACID	511,000	0	0	511,000	0	0
			METHANOL	516,000	0	70,000	586,000	0	0
			NITRATE COMPOUNDS	0	0	25,000	25,000	0	0
			PHENOL	630	0	100	730	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	BOISE CASCADE PAPER DIVISION	WALLULA	PHOSPHORIC ACID	0	0	0	0	0	0
			SULFURIC ACID	27,000	0	0	27,000	0	0
	Total for: BOISE CASCADE PAPER DIVISION			1,151,710	0	109,707	1,261,417	0	0
	CROWN BEVERAGE PACKAGING	WALLA WALLA	ETHYLBENZENE	22,597	0	0	22,597	0	0
			GLYCOL ETHERS	94,795	0	0	94,795	0	0
			METHYL ISOBUTYL KETONE	7,206	0	0	7,206	0	0
			N-BUTYL ALCOHOL	9,896	0	0	9,896	0	0
			XYLENE (MIXED ISOMERS)	105,778	0	0	105,778	0	0
	Total for: CROWN BEVERAGE PACKAGING			240,272	0	0	240,272	0	0
	IBP INC (IOWA BEEF PROCESSORS)	WALLULA	AMMONIA	39,300	0	0	39,300	0	16,000
			CHLORINE	5	0	0	5	0	0
			PHOSPHORIC ACID	5	0	0	5	0	0
	Total for: IBP INC (IOWA BEEF PROCESSORS)			39,310	0	0	39,310	0	16,000
	NELSON IRRIGATION CORP	WALLA WALLA	COPPER	250	0	0	250	0	396,650
			LEAD	250	0	0	250	0	22,875
	Total for: NELSON IRRIGATION CORP			500	0	0	500	0	419,525
	REIFF MFG	WALLA WALLA	STYRENE	7,924	0	0	7,924	0	0
	Total for: REIFF MFG			7,924	0	0	7,924	0	0
	County Total for WALLA WALLA			1,439,716	0	109,707	1,549,423	0	435,525
WHATCOM									
	ARCO CHERRY POINT REFINERY	FERNDALE	1,2,4-TRIMETHYLBENZENE	5,160	2	0	5,162	0	0
			AMMONIA	750	0	7,500	8,250	0	0
			BENZENE	24,000	1	2	24,003	0	280
			CUMENE	610	2	0	612	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	ARCO CHERRY POINT REFINERY	FERNDALE	CYCLOHEXANE	5,750	3	0	5,753	0	0
			DIETHANOLAMINE	1,220	0	6,700	7,920	0	0
			ETHYLBENZENE	6,300	0	0	6,300	0	0
			ETHYLENE	568	0	0	568	0	0
			MANGANESE COMPOUNDS	82	0	640	722	0	31,000
			METHANOL	5,100	0	0	5,100	0	0
			N-HEXANE	12,100	6	0	12,106	0	0
			NAPHTHALENE	1,060	0	0	1,060	0	0
			NICKEL COMPOUNDS	1,000	0	380	1,380	0	46,000
			NITRATE COMPOUNDS	0	0	26,000	26,000	0	0
			PROPYLENE	840	0	0	840	0	0
			SULFURIC ACID	80,000	0	0	80,000	0	0
			TOLUENE	35,800	0	1	35,801	0	0
			XYLENE (MIXED ISOMERS)	26,600	0	0	26,600	0	0
	Total for: ARCO CHERRY POINT REFINERY			206,940	14	41,223	248,177	0	77,280
	BROOKS MANUFACTURING	BELLINGHAM	PENTACHLOROPHENOL	10	0	1	11	0	114
	Total for: BROOKS MANUFACTURING CO			10	0	1	11	0	114
	DARIGOLD-LYNDEN	LYNDEN	NITRIC ACID	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: DARIGOLD-LYNDEN			0	0	0	0	0	0
	ERSHIGS INC	BELLINGHAM	STYRENE	28,300	0	0	28,300	0	4,600
	Total for: ERSHIGS INC			28,300	0	0	28,300	0	4,600
	GEORGIA-PACIFIC WEST, INC	BELLINGHAM	ACETALDEHYDE	39,000	0	21,000	60,000	0	0
			ACRYLIC ACID	311	0	0	311	0	0
			AMMONIA	789	0	100,000	100,789	0	0
			CHLORINE	3,840	0	0	3,840	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	GEORGIA-PACIFIC WEST, INC	BELLINGHAM	CHLORINE DIOXIDE	433	0	0	433	0	0
			CHLOROFORM	230,000	0	4,600	234,600	0	0
			CHROMIUM COMPOUNDS	790	0	8,600	9,390	0	153
			DICHLORODIFLUOROMETHANE	0	0	0	0	0	0
			FORMALDEHYDE	5,257	0	26	5,283	0	0
			FORMIC ACID	1,000	0	0	1,000	0	0
			HYDROCHLORIC ACID	160,110	0	0	160,110	0	0
			MANGANESE COMPOUNDS	11	0	11	22	0	880
			MERCURY COMPOUNDS	1,460	0	45	1,505	0	205
			METHANOL	170,260	0	1	170,261	0	0
			METHYL ISOBUTYL KETONE	552	0	0	552	0	0
			NITRATE COMPOUNDS	0	0	280,000	280,000	0	0
			NITRIC ACID	1,303	0	0	1,303	0	0
			PHOSPHORIC ACID	26	0	0	26	0	0
			SULFURIC ACID	8,600	0	0	8,600	0	0
			ZINC COMPOUNDS	15	0	600	615	0	788
	Total for: GEORGIA-PACIFIC WEST, INC			623,757	0	414,883	1,038,640	0	2,026
	INTALCO ALUMINUM CORPORATION	FERNDALE	CARBONYL SULFIDE	374,263	0	0	374,263	0	0
			CHLORINE	1	0	0	1	0	0
			CHROMIUM	1	0	0	1	0	0
			COPPER	2	0	0	2	0	0
			ETHYLENE GLYCOL	0	0	0	0	0	2,920
			HYDROGEN FLUORIDE	112,930	0	0	112,930	0	0
			MANGANESE	10	0	0	10	0	0
			SULFURIC ACID	0	0	0	0	0	0
	Total for: INTALCO ALUMINUM			487,207	0	0	487,207	0	2,920
	LISTER CHAIN & FORGE	BLAINE	MANGANESE	0	250	0	250	0	4,600

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	Total for: LISTER CHAIN & FORGE			0	250	0	250	0	4,600
	MAAX-HYDRO SWIRL MFG. CORP.	BELLINGHAM	STYRENE	14,648	0	0	14,648	0	0
	Total for: MAAX-HYDRO SWIRL MFG. CORP.			14,648	0	0	14,648	0	0
	PRAXAIR INC FERNDALE	FERNDALE	AMMONIA	36,740	0	0	36,740	0	0
	Total for: PRAXAIR INC FERNDALE			36,740	0	0	36,740	0	0
	TOSCO REFINING COMPANY	FERNDALE	1,1,1-TRICHLOROETHANE	2	0	0	2	0	0
			1,2,4-TRIMETHYLBENZENE	7,180	0	11	7,191	0	0
			1,3-BUTADIENE	870	0	0	870	0	0
			AMMONIA	420	0	3,700	4,120	0	0
			ANTHRACENE	30	0	13	43	0	0
			BENZENE	9,700	0	13	9,713	0	0
			CHROMIUM COMPOUNDS	0	21	2,000	2,021	0	0
			CRESOL (MIXED ISOMERS)	96	0	11	107	0	0
			CUMENE	1,900	0	11	1,911	0	0
			CYCLOHEXANE	15,700	0	0	15,700	0	0
			DIETHANOLAMINE	640	0	0	640	0	0
			ETHYLBENZENE	5,740	0	13	5,753	0	0
			ETHYLENE	3,280	0	0	3,280	0	0
			HYDROGEN FLUORIDE	460	0	0	460	0	0
			LEAD COMPOUNDS	0	590	0	590	0	0
			MANGANESE COMPOUNDS	7	0	1,100	1,107	0	0
			N-HEXANE	19,400	0	0	19,400	0	0
			NAPHTHALENE	927	9	0	936	0	0
			NITRATE COMPOUNDS	0	0	46,000	46,000	0	0
			PHENOL	300	0	100	400	0	0
			PROPYLENE	2,480	0	0	2,480	0	0
			TOLUENE	31,400	0	13	31,413	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	TOSCO REFINING COMPANY	FERNDALE	XYLENE (MIXED ISOMERS)	31,600	2	13	31,615	0	0
	Total for: TOSCO REFINING COMPANY			132,132	622	52,998	185,752	0	0
	WRIGHT BROS INC	BELLINGHAM	STYRENE	8,753	0	0	8,753	0	0
	Total for: WRIGHT BROS INC			8,753	0	0	8,753	0	0
	County Total for WHATCOM			1,538,487	886	509,105	2,048,478	0	91,540
YAKIMA									
	BAY ZINC COMPANY, INC.	MOXEE	COPPER COMPOUNDS	32	0	0	32	0	754
			LEAD COMPOUNDS	269	0	0	269	0	65,000
			MANGANESE COMPOUNDS	158	0	0	158	0	21
			SULFURIC ACID	0	0	0	0	0	0
			ZINC COMPOUNDS	4,086	0	0	4,086	0	2,730
	Total for: BAY ZINC COMPANY, INC.			4,545	0	0	4,545	0	68,505
	CALIFORNIA WASHINGTON CAN	TOPPENISH	GLYCOL ETHERS	35,200	0	0	35,200	0	2,370
	Total for:	CALIFORNIA WASHINGTON CAN		35,200	0	0	35,200	0	2,370
	DARIGOLD-SUNNYSIDE	SUNNYSIDE	NITRIC ACID	0	0	0	0	0	0
			PHOSPHORIC ACID	0	0	0	0	0	0
	Total for: DARIGOLD-SUNNYSIDE			0	0	0	0	0	0
	JOHN I HAAS HEXANE EXT PLANT	YAKIMA	N-HEXANE	80,000	0	0	80,000	5	255
	Total for: JOHN I HAAS HEXANE EXT PLANT			80,000	0	0	80,000	5	255
	NOEL CANNING	YAKIMA	GLYCOL ETHERS	200	10,301	200	10,701	50	0
	Total for: NOEL CANNING			200	10,301	200	10,701	50	0
	SHIELDS BAG & PRINTING CO	YAKIMA	DIBUTYL PHTHALATE	9,300	0	0	9,300	0	265
			METHANOL	7,440	0	0	7,440	0	265
	Total for: SHIELDS BAG & PRINTING CO			16,740	0	0	16,740	0	530
	SNOKIST GROWERS	YAKIMA	AMMONIA	0	0	0	0	0	0

County	Name	City	Chemical	Air	Land	Water	Total	POTW Transfer	Off-site Transfer
	SNOKIST GROWERS	YAKIMA	CHLORINE	0	0	0	0	0	0
	Total for: SNOKIST GROWERS			0	0	0	0	0	0
	TRAIL WAGONS INC	YAKIMA	STYRENE	6,520	0	0	6,520	0	0
	Total for: TRAIL WAGONS INC			6,520	0	0	6,520	0	0
	TREE TOP INC SELAH	SELAH	NITRATE COMPOUNDS	0	0	0	0	0	99,000
	Total for: TREE TOP INC SELAH			0	0	0	0	0	99,000
	WESTERN RECREATION VEHICLES INC	YAKIMA	DIISOCYANATES	0	0	0	0	0	0
			STYRENE	15,726	0	0	15,726	0	0
	Total for: WESTERN RECREATION VEHICLES			15,726	0	0	15,726	0	0
	County Total for YAKIMA			158,931	10,301	200	169,432	55	170,660
	Grand Total			23,401,215	141,194	2,532,241	26,074,650	1,692,907	16,609,737

Appendix 4. Washington TRI Certification Reporters, 1996 (FORM A)

NAME	CITY	COUNTY	CHEMICAL
ARCO CHERRY POINT REFINERY	FERNDALE	WHATCOM	PHOSPHORIC ACID TETRACHLOROETHYLENE MOLYBDENUM TRIOXIDE COBALT COMPOUNDS 1,1,1-TRICHLOROETHANE CRESOL (MIXED ISOMERS)
BARDAHL MANUFACTURING CORP	SEATTLE	KING	POLYCHLORINATED ALKANES LEAD COMPOUNDS
BETZDEARBORN-WASHOUGAL	WASHOUGAL	CLARK	PHOSPHORIC ACID
BORDEN PACKAGING AND INDUSTRIAL	KENT	KING	AMMONIA
CASCADE POLE CO	TACOMA	PIERCE	ARSENIC COMPOUNDS CHROMIUM COMPOUNDS COPPER COMPOUNDS PENTACHLOROPHENOL
CH20 INC	OLYMPIA	THURSTON	PHOSPHORIC ACID
CHEMCO INC	FERNDALE	WHATCOM	COPPER COMPOUNDS ARSENIC COMPOUNDS PHOSPHORIC ACID
COLUMBIA BEVERAGE CO	TUMWATER	THURSTON	PHOSPHORIC ACID
COLUMBIA MACHINE INC	VANCOUVER	CLARK	METHANOL
CONNELLY SKIS INC	LYNNWOOD	SNOHOMISH	DIISOCYANATES
CYTEC INDUSTRIES INC	LONGVIEW	COWLITZ	HYDROCHLORIC ACID AMMONIA DIMETHYLAMINE ACRYLIC ACID METHANOL
FLEETWOOD HOMES OF WASH INC	WOODLAND	COWLITZ	DIISOCYANATES
FLUKE CORPORATION	EVERETT	SNOHOMISH	COPPER

NAME	CITY	COUNTY	CHEMICAL
JONES CHEMICALS	TACOMA	PIERCE	AMMONIA
KALAMA CHEMICAL, INC.	KALAMA	COWLITZ	PHOSPHORIC ACID
LAMB-WESTON INC	CONNELL	FRANKLIN	CHLORINE
LAND O LAKES INC CHEHALIS	CHEHALIS	LEWIS	ZINC COMPOUNDS
MANGANESE COMPOUNDS			
METALLIC ARTS	SPOKANE	SPOKANE	COPPER
MUTUAL MATERIALS CO MICA BRICK PLANT	MICA		MANGANESE COMPOUNDS
CHROMIUM COMPOUNDS			
MUTUAL MATERIALS CO NEWCASTLE BRICK PLANT	RENTON	KING	BARIUM COMPOUNDS
MANGANESE COMPOUNDS			
NOEL CANNING	YAKIMA	YAKIMA	AMMONIA PHOSPHORIC ACID CHLORINE
OESEER CO	BELLINGHAM	WHATCOM	PENTACHLOROPHENOL POLYCYCLIC AROMATIC COMPOUNDS
PEPSI-COLA BOTTLING CO	YAKIMA	YAKIMA	CHLORINE PHOSPHORIC ACID
PEPSI-COLA CO	SEATTLE	KING	PHOSPHORIC ACID
PONDERAY NEWSPRINT CO	USK	PEND OREILLE	PHOSPHORIC ACID CHLORINE
PORT TOWNSEND PAPER CORP	PORT TOWNSEND	JEFFERSON	PHOSPHORIC ACID
PURINA MILLS INC SPOKANE	SPOKANE	SPOKANE	COPPER COMPOUNDS ZINC COMPOUNDS MANGANESE COMPOUNDS
RICHLAND SPECIALTY EXTRUSIONS	RICHLAND	BENTON	COPPER
SENECA FOODS WAPATO	WAPATO	YAKIMA	GLYCOL ETHERS DIETHANOLAMINE DIPHENYLAMINE PHOSPHORIC ACID ZINC COMPOUNDS
TELECT INC	SPOKANE	SPOKANE	DIISOCYANATES

NAME	CITY	COUNTY	CHEMICAL
VANALCO INC	VANCOUVER	CLARK	CHLORINE
WESMAR CO INC	SEATTLE	KING	NITRIC ACID PHOSPHORIC ACID
WESTERN STEEL CASTING CO			NICKEL CHROMIUM MANGANESE
WESTERN WOOD PRESERVING CO	SUMNER	PIERCE	COPPER COMPOUNDS CHROMIUM COMPOUNDS ARSENIC COMPOUNDS
YAKIMA BAIT CO WORDENS LURES	GRANGER	YAKIMA	LEAD

Appendix 5. Reporting Requirements and Definition of Terms

Reporting Requirements and Definition of Terms

Toxics Release Inventory Chemical List - This lists contains chemicals or chemical categories which facilities must report under Section 313 of the EPCRA. With the Governor's authority 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 hazard outside a facility as a result of continuous or frequently recurring releases. In addition, chemicals may be added if they cause or may be reasonably anticipated to cause cancer or birth defects or serious or irreversible reproductive dysfunctions, neurological disorders, heritable genetic or other chronic health effects. A chemical that causes or may cause a significant adverse effect on the environment may be included. EPA may delete chemicals from the list if there is not sufficient evidence to establish that the chemical meets any of the criteria.

Changes to the Chemical List - EPA has made significant changes to the chemical list since 1987. The most recent is the addition of about 286 chemicals to the list for 1995 reporting year.

Facilities Covered - A plant, factory, or other facility must report under Section 313 of EPCRA if it meets all of the following requirements:

1. If it conducts manufacturing operations (that is if it is included in the following Standard Industrial Classification (SIC) codes 20 -39 or is a federal facility that meets the other two criteria.:
(The SIC code numbers and names listed here are the general industrial categories, a 2 digit number representing the general categories of manufactured products. Each facility will have one or more 4 digit numbers that specifically describes its manufacturing process.

SIC CODE	NAME
20	Food and Kindred Products
21	Tobacco Manufacturers
22	Textile Mill Products
23	Apparel and Other Textiles
24	Lumber and Wood Products
25	Furniture and Fixtures
26	Paper and Allied Products
27	Printing and Publishing
28	Chemicals and Allied Products
29	Petroleum Refining
30	Rubber And Misc. Plastic Products
31	Leather and Leather Products
32	Stone, Clay and Glass Products
33	Primary Metal Products
34	Fabricated Metal Products
35	Industrial, Commercial Machinery and Computers
36	Electronic Equipment and Components
37	Transportation Equipment
38	Instruments and Related Products
39	Misc. Manufacturing Industries

2. If, in addition, it has 10 or more full-time employees or the equivalent (20,000 hours): and
3. If, in addition to the above, it manufactures, imports, processes, or in any other way uses any of the toxic chemicals listed under Section 313 of EPCRA in amounts greater than the threshold quantities. See "Thresholds" below.

Thresholds - Amounts of chemicals that trigger reporting requirements. If a facility annually manufactures or processes any listed toxic chemical, the threshold quantity is 25,000 pounds. If a facility "otherwise uses" any listed chemical, in any way other than incorporating it into a product, the threshold quantity is 10,000 pounds. The alternate threshold which triggers Form R reporting even if total volume is under 500 pounds (see Certification Form) is one million pounds manufactured, processed or otherwise used..
Certification Form - Alternate two page report form that may be filed if a facility's total volume under Column on Section 8 of the Form R is 500 pounds or less. This is the total volume of chemical released, transferred, used for energy recovery or treated or recycled on or off site.

Alternate Threshold-Amount of chemical that triggers reporting requirement even if facility meets the criteria for the Certification Form A. This amount is 1 million pounds of chemical manufactured, processed or “otherwise used”.

Releases to Air - Releases to air are reported as either non-point or “fugitive” or point or “stack” emissions. Fugitive emissions are releases that are not conveyed through stacks, vents, pipes or any other confined air stream. Examples include leakage from valves, pump seals, flanges, compressors, open ended lines, evaporative losses from surface impoundments and production lines, and releases from building ventilation systems. Stack or point air emissions are releases to air which are conveyed through stacks, vents, ducts pipes or other confined air streams, and include storage tank emissions and air releases from control equipment.

Releases to Water - Releases to water include releases to streams, lakes, or other bodies of water.

Releases to Land - Releases to land occur either the boundary of the reporting facility. Releases to land include disposal of wastes in a landfill, in which the waste is buried, land treatment/application farming in which a waste is applied onto or incorporated into soil, and surface impoundment which is an uncovered holding area used to volatilize and/or settle waste materials.

Underground Injection - Underground injection is the disposal of fluids by burial of the fluids in a Class I or V well.

Transfers to Public Owned Waste Water Treatment Works (POTW) - A POTW is a waste water treatment facility that is owned by a state or local municipality. Waste waters reported as transferred to POTWs are transferred through pipes or sewers. The chemicals contained in the waste water are treated at the POTW through a variety of methods. In general, chemicals are likely to be removed to some extent. Those chemicals not removed by treatment are released by the POTW to surface waters.

Off-site Transfers - An off-site transfer is the transfer of wastes to a facility that is geographically or physical separate from the manufacturing site. Chemicals are reported as either transfers for treatment, disposal, recycling, energy recovery or “other” means.

Off-site Transfers for Treatment - Treatment of toxic chemicals may include biological treatment, neutralization, incineration or physical separation. Treatment usually results in varying degrees of destruction of the chemical. Treatment may mean preparation for disposal.

Off-site Transfers for Disposal - Disposal of toxic chemicals usually means either release to land (as in a landfill) or underground injection, in this case, at the off-site location.

Off-site Transfers for Energy Recovery - Energy recovery is the combustion in industrial furnaces or boilers that generate energy for use at the location. Non-combustible chemicals like metals and halons should not be reported under this category. Treatment or destruction by incineration is not energy recovery.

Off-site Transfers for Recycling - Recycling means the recovery or regeneration of chemicals by a variety of methods including solvent recovery, metals recovery or acid regeneration. Once they have been recovered, the chemicals may be returned to the originating facility or made available for commerce.