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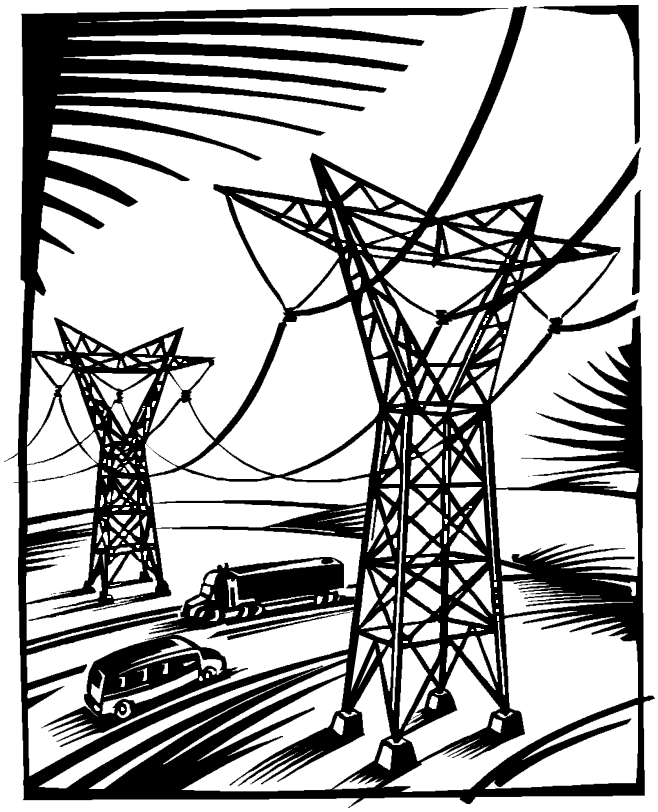
D A T A S U M M A R Y

DELAWARE TOXICS RELEASE INVENTORY REPORT



Information available pursuant to the Emergency Planning and Community Right-to-Know Act (EPCRA)

February 2000

Prepared by the EPCRA Reporting Program

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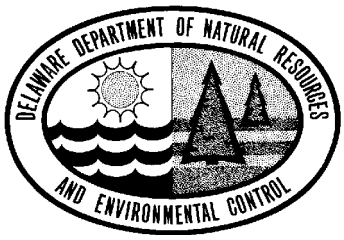
DNREC MISSION STATEMENT

The mission of the Delaware Department of Natural Resources and Environmental Control is to protect and manage the state's vital natural resources, protect public health and safety, provide quality outdoor recreation, and to serve and educate the citizens of the First State about the wise use, conservation, and enhancement of Delaware's environment.



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SECRETARY'S MESSAGE

The Toxics Release Inventory (TRI) program continues to expand in scope, providing the public with a more complete picture of toxic chemicals manufactured and used at nearby facilities. Seven industries were recently added to TRI reporting. As a result, ten Delaware facilities, including coal-fired power plants, bulk petroleum terminals, and one metal ore processor, were required to report for the first time this year. Data from these facilities are provided in this report.

EPA recently finalized another important expansion to TRI by substantially lowering reporting thresholds for 18 highly persistent and bioaccumulative chemicals. These chemicals, such as mercury and PCBs, can have a serious impact on human health and the environment, even at low release levels. Facilities will be required to use the lower thresholds starting with reporting year 2000.

Of course, this information is only beneficial to the public if it is easily accessible and user friendly. I am pleased to say that the Department is now using the power of the computer and the Internet to provide TRI and other community right-to-know data on-line. The data are available through the public information link at ***www2.state.de.us/ serc*** *in an easy-to-use, searchable format. The "Additional Resources" section of this report provides details about this new resource and other Internet sites devoted to community right-to-know.*

I hope you will take the time to read this summary of the 1998 TRI data, and in so doing, gain a better understanding of all the data and information available to you through community right-to-know.

Sincerely,

Nicholas A. DiPasquale, Secretary
Department of Natural Resources and Environmental Control

TOXICS RELEASE INVENTORY

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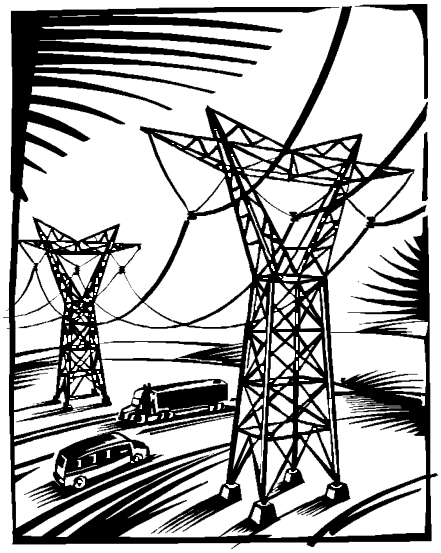
INTRODUCTION

What is the Toxics Release Inventory?

The Toxics Release Inventory, or TRI, is a publicly-available database containing information reported annually for certain toxic chemicals that are manufactured, processed, or otherwise used by certain facilities in Delaware and throughout the United States. The reportable list of toxic chemicals for 1998 included 576 individual chemicals and 28 chemical categories. TRI was established in 1986 under Title III, Section 313, of the federal Superfund Amendments and Reauthorization Act to provide information to the public about the presence and release of these toxic chemicals in their communities. Title III is also known as the Emergency Planning and Community Right-to-Know Act (EPCRA.) In addition to TRI, there are other provisions of EPCRA which provide information to the public as well as to local emergency planning and response organizations. In 1991, Delaware enacted its own EPCRA, which established these provisions under state law. Appendix A highlights the entire Delaware EPCRA program.



Facilities report TRI information to the U.S. Environmental Protection Agency (EPA) and to the state in which the facility is located. In Delaware, the EPCRA Reporting Program within the Department of Natural Resources and Environmental Control (DNREC) receives and compiles TRI data from facilities located within the State. The EPCRA Reporting Program maintains a database which is updated as new reports are received. The database currently contains twelve years of reported data.

This report provides a summary and analysis of the 1998 TRI data received as of November 1, 1999, from Delaware facilities. The report is also intended to provide an understanding of the uses, limitations, and new developments of TRI, and provide ways in which the public may access additional information available through the EPCRA Reporting Program.

The Toxics Release Inventory provides information to the public about the presence and release of toxic chemicals in their communities.

Reporting Requirements

A facility is required to submit a report for a listed toxic chemical if the facility meets **all three** of the following criteria:

1. Employs the equivalent of 10 or more full-time employees,
2. Is a covered industry, or is a federal facility (See Table 1, on the next page, for a list of covered industries), **and**

TOXICS RELEASE INVENTORY

3. Manufactures or processes more than 25,000 pounds, or otherwise uses more than 10,000 pounds, of the listed toxic chemical during the course of the calendar year.

Facilities that meet the criteria for reporting must submit one report (either a Form R or Form A) for each listed toxic chemical manufactured, processed, or otherwise used above threshold quantities. Facilities must submit these reports to EPA and DNREC by July 1 of each year. The reports cover activities during the previous calendar year. It is important to note that a facility may need to report even if it has no releases of the toxic chemical, because reporting is based on the amount manufactured, processed, or otherwise used, and not released.

Table 1 provides a list of covered industries along with corresponding 2- or 4-digit Standard Industrial Classification (SIC) codes. SIC codes are used to identify the type of activities performed at a facility. All industries in Table 1, except manufacturing and federal facilities, were added to TRI beginning with the 1998 reporting year. The section “Recent Developments in TRI Reporting” on page 4 provides more details on the recent industry expansion. Each industry sector represented by facilities reporting in Delaware for 1998 is described in Table 5 on page 7.

TABLE 1
COVERED INDUSTRIES (1)

SIC Codes	Industry
10	Metal Mining (2)
12	Coal Mining (2)
20-39	Manufacturing
4911 4931 4939	Oil- and Coal-fired Electric Utilities
4953	Facilities regulated under RCRA Subtitle C
5169	Wholesale Chemical Distributors
5171	Wholesale Petroleum Stations & Terminals
7389	Solvent Recovery Services
	Federal Facilities

(1) Prior to 1998, only manufacturing and federal facilities were covered under TRI
(2) certain qualifiers that apply to mining industries are not included

The standard report (Form R) contains general facility information and data about on-site releases, off-site transfers, and on-site waste management activities. In lieu of Form R, a short form (Form A) may be used upon meeting certain criteria. After a facility determines that it must report on a given chemical, the facility is eligible to use Form A for that chemical if:

1. The sum of the annual releases, transfers, and wastes managed on-site (known as the "reportable amount") does not exceed 500 pounds, **and**

2. The total annual amount of the chemical manufactured, processed, or otherwise used does not exceed 1,000,000 pounds.

Form A is a two-page report that provides facility information (essentially the same as Form R) and the identification of the chemical, but does not provide any release, transfer, or waste management data.

A facility may need to report even if it has no releases of the toxic chemical, because reporting is based on the amount manufactured, processed, or used.

Uses of TRI Data

TRI provides the public with information concerning certain toxic chemicals manufactured, processed, or otherwise used at facilities,

including the amounts released to the environment and managed as wastes. Public interest and environmental groups, news media, community organizations, educators, researchers, industry, consultants, students, local governments and private citizens have all made use of TRI in the past.

Because TRI covers all media (i.e., air, water, and land), numerous groups within DNREC also use TRI data to enhance programs in areas of pollution prevention, permitting, compliance, waste tracking, emissions inventory, accident prevention, ecosystem impacts, and educational outreach.

Facilities themselves can use the data to focus on processes that may be inefficient and costly in terms of raw material losses or waste handling and disposal. This internal assessment provides facilities an opportunity to prioritize processes that could benefit from pollution prevention initiatives.

Citizens are encouraged to find out which facilities are located near them and review the information in this report or on the EPCRA web pages (See the "Additional Resources" section on page 27 for the web address.) A facility locator map showing each facility that reported to the TRI program for 1998 is provided on page 8. The name, address, public contact person, and telephone number of each facility is provided in Appendix B.

Limitations of TRI Data

The user of TRI data should be aware of its limitations in order to accurately interpret its significance. Only a small fraction of businesses in Delaware are required to report under TRI due to the criteria listed on pages 1 and 2. There are numerous other sources not covered under TRI that release toxic chemicals. These sources include small businesses, motor vehicles, and agricultural operations. For some chemicals, the use of consumer products can be a significant source.

Facilities are required to base TRI data on measurements and monitoring data when these are available. If, however, such data are not available, amounts may be estimated based on published emission factors, mass balance calculations, or good engineering judgment. The methods of estimating or calculating data used by different facilities, or even the same facility over time, may vary, and thus the accuracy of the reported quantities may vary as well. The EPCRA Reporting Program performs cross-checks of the data with other information sources within DNREC to verify its accuracy, and contacts facilities concerning apparent discrepancies.

Only a small fraction of businesses in Delaware are required to report under TRI due to the several reporting criteria.

An important consideration to keep in mind is that TRI does not provide an indication of potential exposure to the reported releases and cannot be used by itself to determine the impact on public health. The chemical's release rate, toxicity, and environmental fate, as well as local meteorology and the proximity of nearby communities to the release must be considered when assessing exposures.

TRI does not provide an indication of potential exposure to the reported releases and cannot be used by itself to determine the impact on public health.

Despite these limitations, TRI can serve as a screening tool to identify areas of concern that may require further investigation. In an effort to provide additional meaning to data reported under TRI, EPA has introduced the Risk-Screening Environmental Indicators computer program, available on CD-ROM and on the Web (refer to page 28 in the "Additional Resources" section for more details on obtaining this useful tool.) The current version of the program allows users to develop a chronic human health indicator that is based on a chemical's reported TRI release amount, its toxicity, and relevant population data. The results offer the user a screening-level, risk-related perspective for **relative comparison** of chemical releases. EPA plans to also develop an acute human health indicator, as well as acute and chronic ecological indicators.

Recent Developments in TRI Reporting

The TRI reporting requirements change as EPA seeks to improve the program through changes to the list of reportable chemicals and through program expansions.

Industry Expansion - On May 1, 1997, EPA added seven industries to the list of covered facilities under TRI. Prior to the 1998 reporting year, only manufacturers (SIC codes 20-39) and federal facilities were required to report (See Table 1 on page 2.) EPA included the seven industries because facilities within these industries manufacture and use substantial quantities of TRI chemicals and engage in activities related to those conducted by manufacturing facilities.

The industry expansion increased the amount of reported releases by 7.5 million pounds for 1998, more than doubling the amount reported for past years. This does not necessarily represent an increase in toxic releases in Delaware, but rather additional information that is now available to the public. **Caution should be exercised when interpreting these new data when compared to prior years.**

Chemical List Changes - EPA periodically changes the list of reportable chemicals by adding, deleting, or qualifying chemicals as new information about these chemicals becomes available. No chemicals were added to the TRI list for 1998. The number of

reportable chemicals, however, substantially increased for the 1995 reporting year and beyond, including the addition of over 200 chemicals and six chemical categories. A chemical category under TRI may include a discreet list of chemicals or may represent any chemical that possesses the category's characteristics.

In response to the increased reporting burden on industry resulting from the chemical list expansion of 1995, EPA initiated the use of Form A described on page 2.

Persistent, Bioaccumulative, Toxic (PBT) Chemicals - In an October 29, 1999 ruling, EPA established substantially lower reporting thresholds for 15 chemicals and three chemical categories that are highly persistent and bioaccumulative in the environment. EPA believes that the current reporting thresholds (presented in the third criterion on page 2) exclude important information on these chemicals. Not all of these PBT chemicals are currently reportable under TRI. For reporting year 2000 and beyond, EPA will add four chemicals, one chemical category, and two chemicals to an existing category.

The manufacture, process, and otherwise use activity thresholds will be the same for a given PBT chemical. Table 2 provides a list of the chemicals and thresholds. Facilities are required to report on the new chemicals and use the lower thresholds starting with the year 2000 reports that are due by July 1, 2001. EPA is additionally seeking to lower the reporting threshold for lead and lead compounds in a separate ruling.

TABLE 2
PBT CHEMICALS &
REPORTING THRESHOLDS
(pounds/year)

Chemical	Threshold
Aldrin	100
Benzo(g,h,i)perylene (1)	10
Chlordane	10
Dioxin Compounds (1)(2)	0.1 grams
Heptachlor	10
Hexachlorobenzene	10
Isodrin	10
Mercury	10
Mercury Compounds	10
Methoxychlor	100
Octachlorostyrene (1)	10
Pendimethalin	100
Pentachlorobenzene (1)	10
Polycyclic aromatic	100
Polychlorinated biphenyls	10
Tetrabromobisphenol A (1)	100
Toxaphene	10
Trifluralin	100

(1) not currently reportable under TRI
(2) category includes dioxin and dioxin-like compounds; certain use exemptions apply
(3) two new chemicals will be added to this category: 3-Methylcholanthrene and Benzo(j,k)fluorene

DNREC Management of TRI Chemicals

The availability of TRI data has heightened awareness of toxic chemicals in our society, and has focused attention on the reduction and management of these chemicals. Since TRI reporting began, some facilities have gained a better understanding of material losses from their operations. While EPCRA does not require that TRI releases and wastes be reduced, many companies have implemented pollution prevention and waste reduction measures in an effort to reduce raw material losses, waste disposal costs, and risks associated with toxic chemicals. Reductions also improve their public image and demonstrate corporate responsibility to their neighbors. For whatever reason, these measures have sometimes yielded significant reductions in the generation of waste and the release of toxics to the environment.

Most releases reported under TRI are regulated through air emission, water discharge, and/or land disposal permits.

Although EPCRA does not mandate reductions, there are numerous other programs within DNREC that directly impact the management of TRI chemicals through the issuance of permits or through other regulatory and non-regulatory activities. For example, the Air Permitting & Compliance Branch enforces a provision in the Clean Air Act Amendments of 1990 that targets the control of hazardous air pollutants (HAPs.) Nearly all HAPs are also reportable TRI chemicals. Another example is the work performed by the Accidental Release Prevention (ARP) program. The ARP staff use TRI data to detect possible deficiencies at a facility that might result in an increased probability of an accidental release. They then work with those facilities to reduce the probability by identifying problem areas and suggesting improvements. As a facility improves its operations to prevent accidental releases it often concurrently decreases routine releases.

DNREC also monitors ambient levels of some air toxics at sites in Wilmington, along Route 9 near Delaware City, at Lums Pond State Park, and in Seaford. For more information regarding the air monitoring network and data obtained from these sites, please refer to page 28 of the "Additional Resources" section.

TABLE 3
CARCINOGENS REPORTED BY DELAWARE FACILITIES FOR 1998

Chemical	IARC Rating	No. of Report
Acrylonitrile	2A	1
Arsenic Compounds (1)	1	1
Atrazine	2B	1
Benzene	1	8
1,3-Butadiene	2A	2
p-Chloroaniline	2B	1
Chloroform	2B	1
Chromium Compounds (2)	1	7
1,4-Dichlorobenzene	2B	1
Dichloromethane	2B	2
1,3-Dichloropropylene	2B	1
Di(2-ethylhexyl) phthalate	2B	1
N,N-Dimethylformamide	2B	1
Ethyl Acrylate	2B	2
Ethylene Oxide	1	2
Formaldehyde	2A	2
Lead	2B	1
Lead Compounds (1)	2B	4
4,4'-Methylenebis(2-		
Nickel	2B	3
Nickel Compounds (1)	1	5
Nitrobenzene	2B	1
Polycyclic Aromatic		
Propylene Oxide	2B	1
Styrene	2B	6
Tetrachloroethylene	2B	2
Toluenediisocyanates	2B	2
Trichloroethylene	2A	2
Vinyl Acetate	2B	2
Vinyl Chloride	1	2

(1) certain inorganic compounds
(2) hexavalent chromium only
(3) 17 of 19 chemicals listed in category

Carcinogenic TRI Chemicals

Some chemicals are reportable under TRI because they are either known or suspected human carcinogens. Known human carcinogens are those that have been shown to cause cancer in humans. Suspected carcinogens are those chemicals that have been shown to cause cancer in animals. Table 3 contains those known and suspected carcinogens that were reported by Delaware facilities for 1998. Next to each chemical is its International Agency for Research on Cancer (IARC) rating[1] as either a known (1), probable (2A), or possible (2B) carcinogen. Of the 12.8 million pounds of TRI chemicals reported by facilities as released on-site to the environment in 1998, 7% were of known or suspected carcinogens.

[1] *As provided in EPA's 1997 Toxics Release Inventory Public Data Release, April 1999, Box 2-8, pages 2-40/41.*

1998 DATA SUMMARY

Statewide totals of 1998 TRI on-site releases, off-site transfers, and wastes managed on-site are provided in Table 4. A total of 79 facilities submitted 340 reports on 104 different chemicals. Of the 340 reports, 76 were submitted using Form A. Five chemicals were reported in Delaware for the first time for 1998, including **atrazine**, **barium**, **dimethoate**, **trichlorofluoromethane**, and **zinc (fume or dust)**. Of the 79 facilities, ten are from the industries required to report for the first time this year. Table 4 provides a separate column of data for these newly-covered industries.

Table 5 provides a description of each SIC code industry group and the number of facilities in each group that reported in Delaware. This table also provides on-site releases, off-site transfers, and wastes managed on-site for each group. Of the seven additional industries included this year (See Table 1 on page 2), facilities from only three of them

TABLE 4
1998 TRI DATA SUMMARY
(in pounds)

	1998 Man-ufacturing	1998 New Industries	1998 Totals
No. of Facilities	69	10	79
No. of Form Rs	232	32	264
No. of Form As	36	40	76
No. of Chemicals	91	26	104
On-site Releases			
Air	4,270,398	6,832,696	11,103,094
Water	747,214	59,740	806,954
Land	346,959	590,579	937,538
Total Releases	**5,364,571**	**7,483,015**	**12,847,586**
Off-site Transfers			
POTWs (1)	3,333,068	108	3,333,176
Recycle	11,981,086	210	11,981,296
Energy Recovery	1,489,982	0	1,489,982
Treatment	632,119	300	632,419
Disposal	159,208	263,604	422,812
Total Transfers	**17,595,463**	**264,222**	**17,859,685**
On-site Waste Mgmt.			
Recycle	34,449,050	0	34,449,050
Energy Recovery	16,155,665	0	16,155,665
Treatment	66,770,660	926,667	67,697,327
Total On-site Mgmt.	**117,375,375**	**926,667**	**118,302,042**
Total Waste	**140,335,409**	**8,673,904**	**149,009,313**

Source: DNREC TRI Database - 1998 Data 11/99
(1) Publicly-owned Treatment Works

TABLE 5
1998 TRI DATA BY PRIMARY SIC CODE
(in pounds)

SIC Code	Industry Group	No. of Facilities	Form Rs	Form As	On-site Releases	Off-site Transfers	On-site Waste
10	Metal Mining (1)	1	4	0	11,963	0	0
20	Food Products	10	13	14	396,776	1,110	134,500
22	Textile Mill Products	2	4	1	91,850	970,647	6,006,658
24	Lumber & Wood Products	1	4	0	53,896	0	0
25	Furniture & Fixtures	1	3	0	29,203	18,770	0
26	Paper Products	2	2	0	18,502	12,310	11,418,486
28	Chemicals	27	102	14	1,894,850	5,855,950	47,360,230
29	Petroleum Refining & Products	3	31	4	1,950,748	41,033	36,298,791
30	Rubber & Plastics	10	17	1	50,014	177,198	3,002,598
33	Primary Metals	3	10	1	12,027	2,985,791	13,000,000
34	Fabricated Metal Products	2	3	0	461	3,092	3,000
35	Commercial Machinery	2	3	0	20	11,309	0
36	Electrical Equipment	1	2	0	297	6,401,676	0
37	Transportation Equipment	2	33	1	863,321	1,090,476	151,112
38	Instruments & Medical Goods	2	4	0	639	26,101	0
39	Miscellaneous Manufacturing	1	1	0	1,967	0	0
4911	Oil- & Coal-fired Power Plants (1)	3	24	3	7,468,952	264,012	926,667
5171	Wholesale Petroleum Terminals (1)	6	4	37	2,100	210	0
	Total	**79**	**264**	**76**	**12,847,586**	**17,859,685**	**118,302,042**

Source: DNREC TRI Database - 1998 Data 11/99
(1) Newly-covered industry

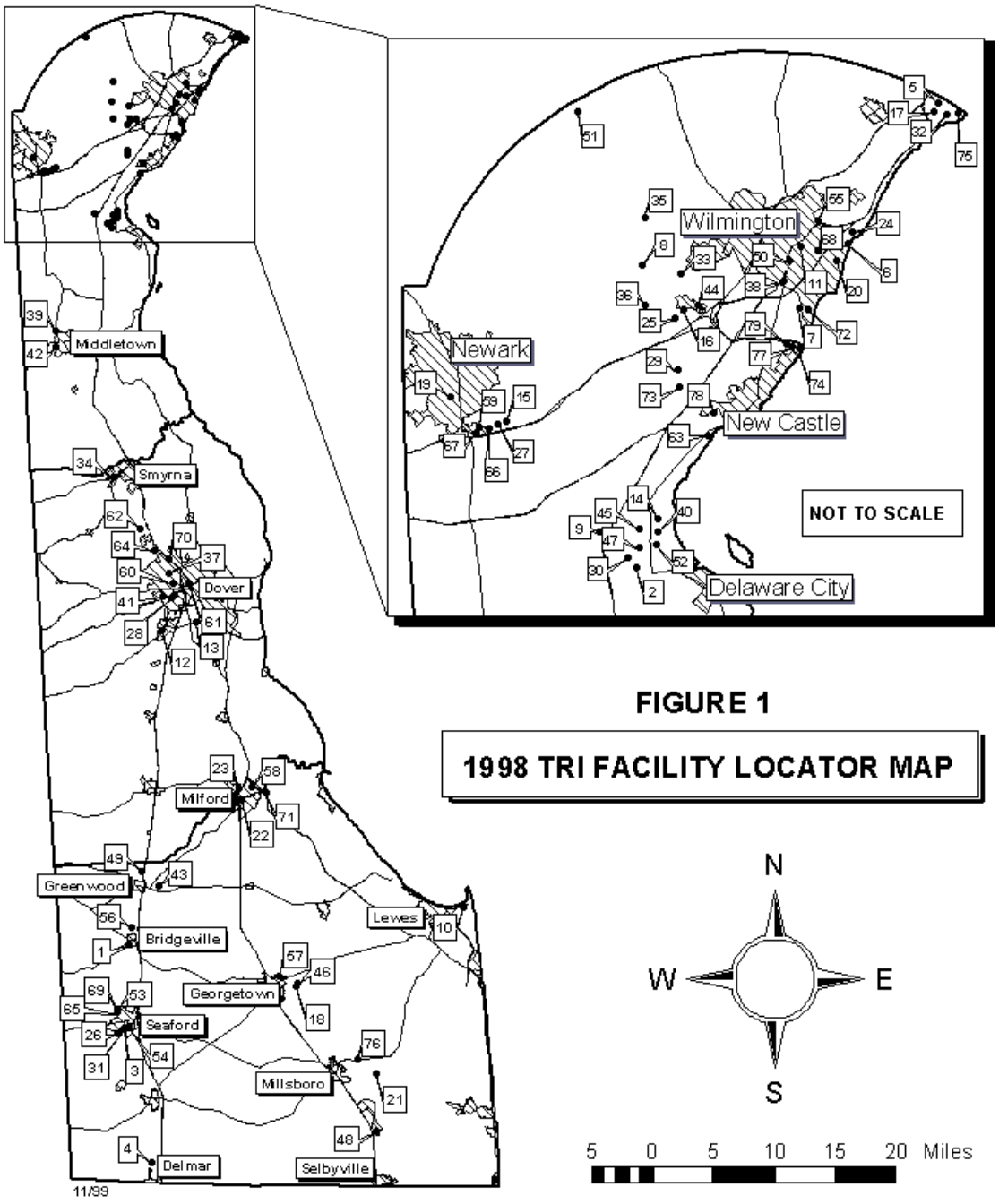


FIGURE 1

1998 TRI FACILITY LOCATOR MAP

reported in Delaware. Note that the new industry, Wholesale Petroleum Terminals, is represented by six facilities that reported almost exclusively using Form A. All three power plants that reported in Delaware combust coal. The one reporting metal mining facility, American Minerals, processes metal ores that they receive by railcar.

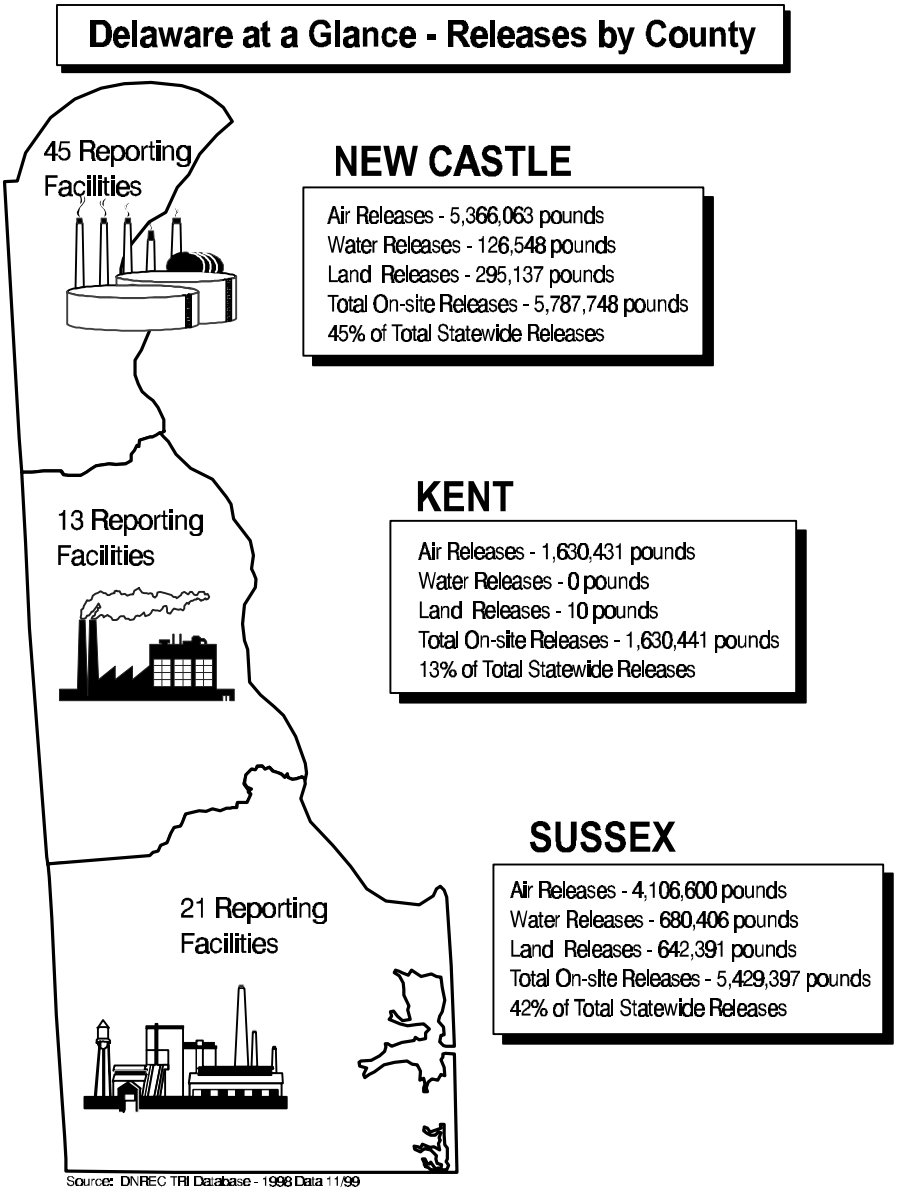
Figure 1 provides the location of each of the reporting facilities within Delaware. The name, address, public contact person, and telephone number of each facility is provided in Appendix B.

FIGURE 1 MAP KEY

Map ID	Facility
1	AGRILINK FOODS
2	AIR LIQUIDE AMERICA
3	ALLEN PETROLEUM
4	ALLEN'S MILLING
5	ALLIEDSIGNAL
6	ALLOY SURFACES
7	AMERICAN MINERALS
8	AMETEK-HAVEG DIVISION
9	ARLON
10	BARCROFT
11	BRANDYWINE COMPOUNDING
12	CAMDEL METALS
13	CARL KING
14	CHLORAMONE
15	CHROME DEPOSIT
16	CIBA SPECIALTY CHEMICALS
17	CITISTEEL USA
18	D&B INDUSTRIAL GROUP
19	DAIMLERCHRYSLER
20	DELMARVA POWER EDGE MOOR
21	DELMARVA POWER INDIAN RIVER
22	DENTSPLY/CAULK MAIN
23	DENTSPLY/CAULK WEST
24	DUPONT EDGE MOOR
25	DUPONT HOLLY RUN
26	DUPONT SEAFORD
27	E-A-R SPECIALTY COMPOSITES
28	FIRST STATE POWER MANAGEMENT
29	FLAIR-NEW CASTLE
30	FORMOSA PLASTICS
31	GAC SEAFORD
32	GENERAL CHEMICAL
33	GENERAL MOTORS
34	HANOVER FOODS
35	HERCULES RESEARCH CENTER
36	HEWLETT-PACKARD
37	HIRSH INDUSTRIES
38	INSTEEL WIRE PRODUCTS
39	JOHNSON CONTROLS
40	KANEKA
41	KRAFT FOODS
42	MACDERMID
43	MARBLE WORKS
44	MEDAL
45	METACHEM PRODUCTS
46	MFG JUSTIN TANKS
47	MOTIVA ENTERPRISES
48	MOUNTAIRE FARMS FEEDMILL
49	NANTICOKE HOMES
50	NORAMCO
51	NVF YORKLYN
52	OCCIDENTAL CHEMICAL
53	ORIENT
54	PENINSULA OIL-BLADES
55	PEPSI-COLA BOTTLING
56	PERDUE BRIDGEVILLE
57	PERDUE GEORGETOWN
58	PERDUE MILFORD
59	PERMA-FLEX
60	PLAYTEX APPAREL
61	PLAYTEX PRODUCTS
62	PPG ARCHITECTURAL FINISHES
63	PRINTPACK
64	REICHHOLD
65	RITE-OFF
66	RODEL
67	RODEL TECHNICAL CENTER
68	ROLLER SERVICE
69	S.C.JOHNSON POLYMER
70	SERVICE ENERGY-DOVER
71	SERVICE ENERGY-MILFORD
72	SICO
73	SPATZ FIBERGLASS
74	SPI POLYOLS
75	SUNOCO MARCUS HOOK REFINERY
76	TOWNSENDS
77	UNIQEMA
78	WILMINGTON LEATHER COATINGS
79	ZENECA SPECIALTIES

Source: DNREC TRI Database 11/99

FIGURE 2



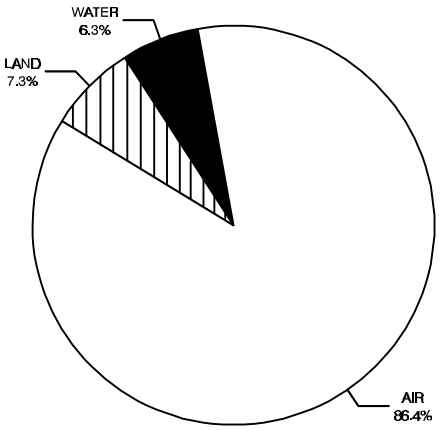
On-site Releases

On-site releases are emissions from a facility to the environment as a result of normal operations or accidents, including emissions to the air, discharges to surface water, disposal onto or in the ground, and underground injection. Underground injection is not an approved method of hazardous waste disposal in Delaware, and thus has not been reported by any facility in Delaware since reporting began.

Figure 2, on the previous page, illustrates the number of facilities that reported from each county along with release totals for each county. By county, 45% of the statewide releases occurred in New Castle, 42% in Sussex, and 13% in Kent. The manufacturing facilities reporting from Kent and Sussex counties are predominantly from the food processing and chemical industries, while those from New Castle County represent a wider variety of industries. One power plant in each county reported.

FIGURE 3

STATEWIDE ON-SITE RELEASES



TOTAL: 12,847,586 POUNDS

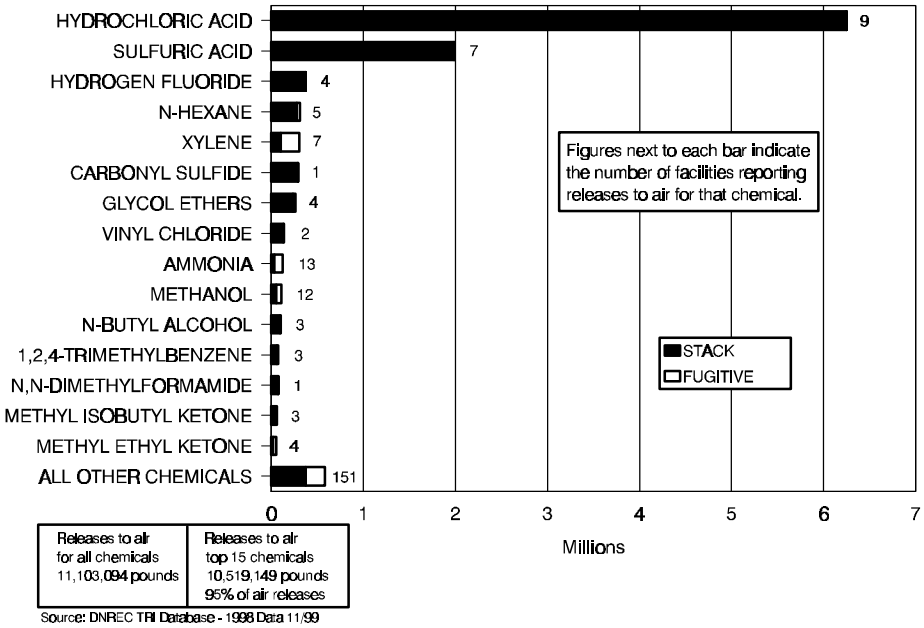
Source: DNREC TRI Database - 1998 Data 11/99

Releases to Air

As illustrated in Figure 3, air releases constitute 86% of the total on-site releases. Figure 4 provides the top 15 TRI chemicals released to Delaware's air in 1998. As a result of the addition of power plants, the top three chemicals with on-site air releases are acid emissions that are formed as a result of the combustion of coal. Specifically, the largest air release amounts were reported for **hydrochloric acid**, **sulfuric acid**, and **hydrogen fluoride**. Coal contains small amounts of chlorine-, fluorine-, and sulfur-containing compounds that, through the combustion process, are converted to the acids. Over three-quarters of statewide TRI releases to air are of these acid gases.

FIGURE 4

RELEASES TO AIR - TOP 15 CHEMICALS



Source: DNREC TRI Database - 1998 Data 11/99

The chemical with the fourth largest on-site air releases is **n-hexane,** which was reported as being released to the air by five facilities. Townsends accounted for 88% of the state's TRI-reported n-hexane air releases. Townsends uses n-hexane in

the process of extracting vegetable oil from soy-beans. The chemical with the fifth largest on-site air releases is **xylene**, which was reported as being released to the air by seven facilities. A primary use of xylene is as a solvent in paints for the automobile manufacturing industry, which represents 92% of the state's TRI-reported xylene releases to air.

Releases to Water

As can be seen in Figure 3, there are fewer TRI releases to water than to air. Table 6 provides the amount of TRI chemicals released to each watershed. These watersheds, except the Nanticoke and Indian Rivers, all flow into the Delaware Bay.

TABLE 6
RELEASES TO WATER BY WATERSHED

Receiving Water Body	No. of Facilitie	No. of Reports	Releases (in pounds)
Nanticoke River	1	1	669,000
Delaware River	6	32	108,168
Red Clay Creek	1	1	18,250
Indian River	1	6	11,286
Savannah Ditch (in	1	1	120
Christina River	2	2	116
Naamans Creek	1	5	10
Red Lion Creek	1	1	4
Total	**14**	**49**	**806,954**

Source: DNREC TRI Database - 1998 Data 11/99

Nitrate compounds was the top chemical released to Delaware's surface waters followed by **zinc compounds** and **methanol**. Nitrates are formed through the biological treatment of ammonia and other nitrogen-containing compounds and were primarily reported as being released to the Nanticoke River by DuPont Seaford. Nitrates are a nutrient, and in excessive amounts they contribute to eutrophication in the aquatic environment.

Zinc compounds were reported as being released to Delaware waters by five facilities. The NVF Yorklyn Complex uses zinc chloride as a catalyst in the process of manufacturing vulcanized paper, and releases zinc to the Red Clay Creek. The Delmarva Power Edge Moor facility reported the release of zinc compounds to the Delaware River, and the Delmarva Power Indian River facility reported the release of zinc compounds to the Indian River. Zinc is found as an impurity in coal, and zinc compounds (usually zinc oxide) are formed during the combustion of the coal.

Releases to Land

Except for the land application of fertilizer and herbicides on crops at the Townsends facility (which EPA considers a release to land), nearly all other reported releases to land were of metals and metal compounds. Land releases reported by Delmarva Power Indian River and Motiva Enterprises accounted for over 90% of the reported statewide releases to land.

Delmarva Power Indian River reported landfilling on-site eight metal compounds with the largest amount being **barium compounds**. These metal compounds are formed during the combustion process from metal impurities that exist in the coal. The metal compounds (usually metal oxides) are contained in the fly ash and bottom ash.

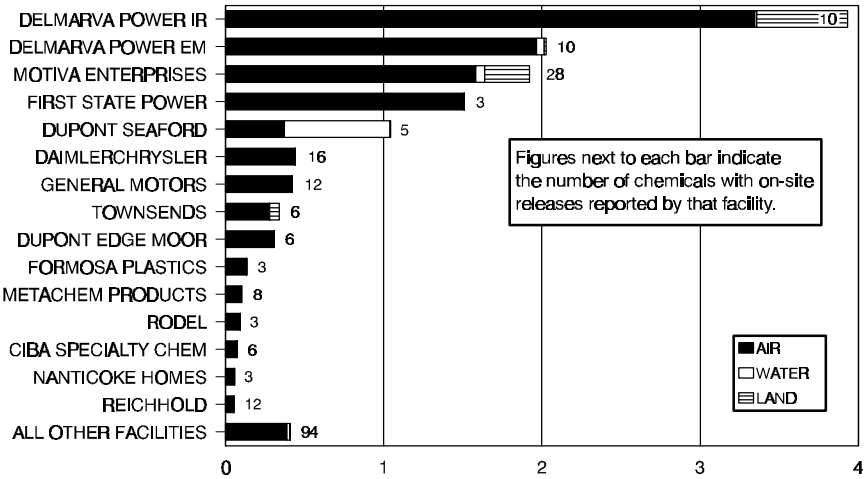
Motiva Enterprises primarily reported the release to land of **nickel compounds**. Nickel compounds are contained in the crude oil received by the refinery. Most of these compounds end up in the petroleum by-product known as coke. Coke is a solid product (like coal) that is generated from the heaviest hydrocarbons present in crude oil. Coke is a fuel and is burned in Motiva Enterprises' power plant. The nickel compounds are converted to nickel oxide in the combustion process. The nickel oxide in the fly ash that is captured by pollution control equipment is sent to a surface impoundment in a liquid slurry form. Nickel oxide in the bottom ash and slag is sent to their on-site landfill.

All 1998 air, water, and land release data, grouped alphabetically by chemical, are provided in Appendix C.

Releases by Facility

Figure 5 illustrates the top 15 facilities with total on-site releases (air, water, and land) for 1998. Table 7 provides their releases for 1997 and 1998 with a comparison between the two years and the rank for each facility for each year. The facility with the most TRI releases in 1998 was the Delmarva Power Indian River Plant, which was required to report for the first time for 1998. The Delmarva Power Edge Moor Plant, also reporting for the first time for 1998, was ranked second. Motiva Enterprises, which ranked second for 1997, moved to third for 1998. First State Power Management, which is also a first-time reporting power plant, and DuPont Seaford round out the top five facilities.

FIGURE 5
ON-SITE RELEASES - TOP 15 FACILITIES



Total releases for all facilities 12,847,586 pounds	Total releases for top 15 facilities 12,438,097 pounds 97% of all releases

Source: DNREC TRI Database - 1998 Data 11/99

It is important to note that all five of these facilities operate on-site power generation units that burn coal or coke (Motiva Enterprises) and consequently have large acid gas emissions. Acid gas emissions reported by these five facilities alone account for nearly two-thirds of the statewide on-site releases.

When reviewing releases from year to year, it is important to keep in mind that the level of production at a facility may change, and consequently may affect the amount that is released. A

TABLE 7
TOP 15 FACILITIES - 1997 & 1998 RANKING BY ON-SITE RELEASES
(in pounds)

Facility	1997 Rank	1998 Rank	No. of Chemicals 1997	No. of Chemicals 1998	On-site Releases 1997	On-site Releases 1998	1997 to 1998 Percent Change	1997 to 1998 Adjusted Change (1)
Delmarva Power Indian River (2)	---	1	---	11	---	3,934,099	---	---
Delmarva Power Edge Moor (2)	---	2	---	13	---	2,026,816	---	---
Motiva Enterprises	2	3	33	32	572,063	1,919,578	236%	238%
First State Power Mgmt. (2)	---	4	---	3	---	1,508,037	---	---
DuPont Seaford	1	5	7	6	1,090,812	1,043,900	-4%	-3%
DaimlerChrysler	8	6	13	20	125,507	441,994	252%	-37%
General Motors	4	7	12	14	420,037	421,327	0%	8%
Townsends	3	8	7	10	536,895	339,153	-37%	-44%
DuPont Edge Moor	5	9	6	6	236,698	305,072	29%	30%
Formosa Plastics	7	10	3	3	136,842	131,977	-4%	-2%
Metachem Products	9	11	8	8	107,642	98,621	-9%	16%
Rodel	6	12	6	4	149,138	91,850	-38%	-16%
Ciba Specialty Chemicals	10	13	7	6	76,455	70,101	-8%	-20%
Nanticoke Homes	22	14	3	4	24,919	53,896	116%	44%
Reichhold	11	15	11	12	46,066	51,676	12%	14%

Source: DNREC TRI Database11/99
(1) The percentages are adjusted using the production ratio and include only data for those chemicals that were reported by a facility for both 1997 and 1998 on the Form R. Also, this analysis does not include non-production related releases.
(2) Facility within a newly-covered industry; not required to report for 1997.

production ratio, which is the current year's level of production divided by the previous year's level, is provided by facilities in the TRI report for each chemical. Using this ratio, the 1998 data can be adjusted to account for the difference in production from 1997 to 1998. Table 7 provides an adjusted percent change of releases using the production ratio. This analysis can be performed for those chemicals that a facility reported on the Form R for both years. Furthermore, releases to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes are removed from the adjusted release totals because these amounts are not related to production at the facility. Finally, this analysis assumes a direct linear relationship between the production level and releases, which may not always be the case. Therefore, this analysis should be used in conjunction with other analyses and information to more accurately gauge a facility's performance.

Appendix G provides the ranking of all facilities that reported in Delaware for 1998 and includes the percent change and adjusted percent change between 1997 and 1998 for each facility.

In addition to the level of production, changes in the amount of releases from one year to the next may be a result of source reduction activities or the installation of better pollution controls. Other changes may result from the availability of new information or the use of different calculation methods, and thus may not represent a true

change in releases. This is the case with a substantial increase in reporting of sulfuric acid by Motiva Enterprises. Interested individuals are encouraged to contact facilities and inquire as to the reasons why changes occurred.

A brief description of each of the top 15 facilities is presented on the next several pages to provide an understanding of the use and importance of some of the TRI chemicals within these facilities. The facility description highlights the types of products manufactured at the facility (or end-products that are manufactured from the facility's products) and how their TRI chemicals relate to the facility's operations. The chart beside each description provides the facility's trend of releases since 1991. The black portion of each bar represents data for chemicals that have been reportable since 1991. Data on chemicals added after 1991 are provided in white. This is done to capture the significance, in some cases, of the reporting of the chemicals added to TRI for 1995. Data on delisted chemicals are not included. **Note that the scale is different for each chart.** Charts for the power plants are not provided since this is their first reporting year. A complete list of 1998 release data, grouped alphabetically by facility, is provided in Appendix E.

Rank #1 - Delmarva Power Indian River Plant - Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located near Millsboro, produces electricity mainly from the combustion of coal.

NO TRI TREND DATA AVAILABLE FIRST-TIME REPORTER

The Indian River Plant reported on eleven TRI chemicals for 1998. Eight of these were metal compounds and the remaining three were acid gases. Both the acid gases and the metal compounds are formed during the combustion process as a result of small amounts of naturally-occurring chemical impurities within the coal. Acid gas emissions--**hydrochloric acid, hydrogen fluoride, and sulfuric acid**--accounted for 84% of their on-site releases. The on-site landfilling of fly ash and bottom ash containing metal compounds accounted for 15% of their on-site releases.

Rank #2 - Delmarva Power Edge Moor Plant - Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located along the Delaware River a mile north of the Port of Wilmington, produces electricity mainly from the combustion of coal.

NO TRI TREND DATA AVAILABLE FIRST-TIME REPORTER

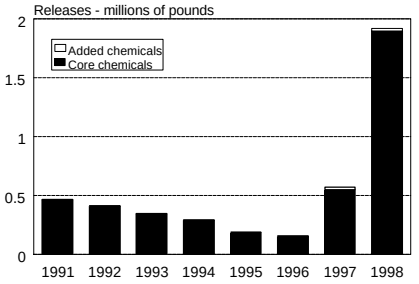
The Edge Moor Plant reported on thirteen TRI chemicals for 1998. Acid gas emissions--**hydrochloric acid, hydrogen fluoride, and sulfuric acid**--accounted for 94% of their on-site releases. The acid gases are formed during the combustion process as a result of small amounts of naturally-occurring chemical impurities within the coal. This facility also reported on six metal compounds, with reported

releases to air, water, and land for each. These metal compounds, which were coincidentally manufactured in the combustion process, are largely captured in the fly ash and bottom ash. The majority of the ash is mixed with digested sewage sludge to generate a product that is used as cover material or structural fill material.

Rank #3 - Motiva Enterprises - The Motiva Refinery, located in the Delaware City industrial complex, refines crude oil into automobile gasoline, home heating oil, and a variety of other petroleum products. The facility, previously known as Star Enterprise, changed ownership on July 1, 1998. Motiva Enterprises is a U.S. joint venture between Shell Oil Company, Texaco, and Saudi Aramco.

Motiva reported on thirty-two TRI chemicals for 1998. **Sulfuric acid** gas emissions accounted for nearly three-quarters of Motiva's on-site releases. Sulfuric acid is formed as an acid gas in several units at the facility, including the Coker and the on-site power plant that combusts coke. Coke is a solid product (like coal) that is generated from the heaviest hydrocarbons present in crude oil. Reported sulfuric acid emissions increased substantially from 1997 due to Motiva's recent determination, following new EPA guidance, that sulfuric acid gas is formed within process units other than the power plant.

MOTIVA ENTERPRISES
(formerly Star Enterprise)



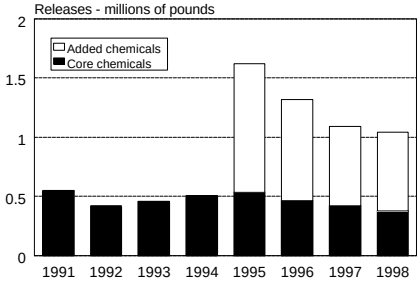
Rank #4 – First State Power Management – Oil- and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located behind the Kraft Foods facility on the west end of Dover, provides electricity and steam to Kraft as well as electricity to the City of Dover.

NO TRI TREND DATA AVAILABLE
FIRST-TIME REPORTER

First State Power Management reported on three chemicals, all acid gases. The acid gases are formed during the combustion process as a result of impurities within the coal. **Hydrochloric acid** accounted for 86% of their on-site releases.

Rank #5 - DuPont Seaford -This facility was the first plant worldwide to produce spun nylon fibers, beginning operations in 1939. The spun nylon is used in the apparel industry, in carpeting, and other fabrics applications. The facility also produces nylon flake for export.

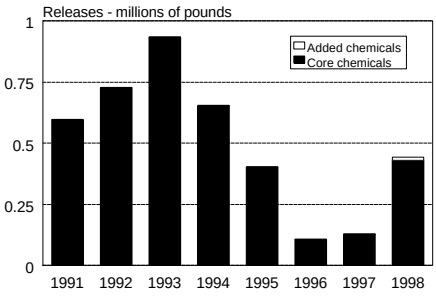
DUPONT SEAFORD
NYLON PLANT



DuPont Seaford reported on six TRI chemicals for 1998. The majority of their on-site releases were of three chemicals, **hydrochloric and sulfuric acids** to the air and **nitrate compounds** to the water. These chemicals are not directly used in the production of nylon, but rather are produced as a result of the facility's support operations. Gaseous hydrochloric and sulfuric acids result from the burning of coal in their power plant. The coal contains small amounts of chlorine- and sulfur-containing compounds that, through the combustion process, convert to acid gases. Nitrate compounds are formed as a by-product of their on-site wastewater treatment plant.

Rank #6 – DaimlerChrysler Newark Assembly Plant – The Chrysler Corporation merged with the Daimler-Benz Company of Germany in November of 1998. This facility assembles automobiles for distribution to dealers. The facility began full production of a new model in September of 1997 following a major facility retooling. The 1998 production was over five times greater than 1997. Thus, even though reported releases increased substantially, on a per-vehicle basis releases were reduced by 37% from 1997 (See Table 7.)

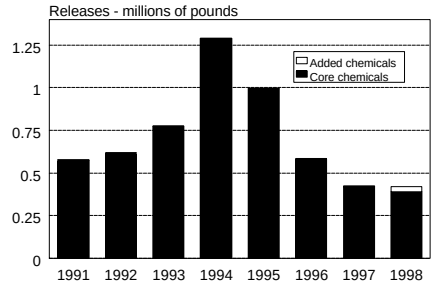
DAIMLERCHRYSLER NEWARK ASSEMBLY PLANT



DaimlerChrysler reported on twenty TRI chemicals for 1998. Many of these are solvents used in paints or for parts cleaning, while others are materials that are incorporated into the cars themselves, such as benzene in gasoline. All on-site releases reported by this facility were to the air. **Glycol ethers**, a paint solvent, accounted for 40% of their on-site releases for 1998. Three other solvents—**1,2,4-trimethylbenzene, n-butyl alcohol, and xylene**—accounted for another 40% of their on-site releases. These solvents are released during painting, parts cleaning, and from the parts drying/curing process. Recent process modifications include the use of a water-borne top coat, a lead-free primer, and a powdered anti-chip coat, all of which reduce the use and release of TRI chemicals.

Rank #7 - General Motors Wilmington Assembly Plant - General Motors assembles automobiles for distribution to dealers.

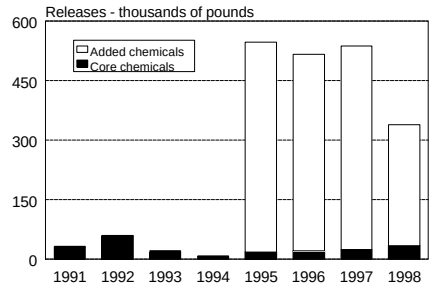
GENERAL MOTORS WILMINGTON ASSEMBLY PLANT



GM reported on fourteen TRI chemicals for 1998. Many of these are solvents used in paints or for parts cleaning, while others are materials that are incorporated into the cars themselves, such as ethylene glycol (antifreeze) in the radiator. All on-site releases reported by GM were to the air. **Xylene**, a paint solvent used in both the base and top coats, accounted for over half of their on-site releases for 1998.

Rank #8 - Townsends - Townsends, known mostly for poultry products, also produces chicken feed and vegetable oil at their facility near Millsboro. Soybeans, a major agricultural crop in Delaware, are processed to make vegetable oils commonly used in salad dressing, mayonnaise, and baking.

TOWNSENDS

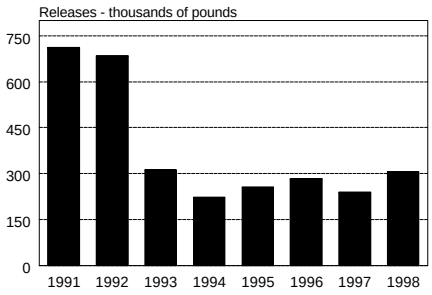


Townsends reported on ten TRI chemicals for 1998. One chemical, **n-hexane**, accounted for 80% of their on-site releases. Liquid n-hexane is used to promote separation of oil from the soybeans. Much of the n-hexane is recycled and reused, with some releases normally occurring during the extraction process. Four chemicals—**ammonia, atrazine, dimethoate, and ethylene glycol**—-were reported as being released to land through application farming. These releases are actually the application of fertilizers and herbicides to crops at the facility. Finally, three other reported chemicals (metal compounds) are used as mineral supplements in the formulation of chicken feed.

Rank #9 - DuPont Edge Moor - The Edge Moor Plant is one of four domestic DuPont facilities that manufacture titanium dioxide, a white pigment that is used in food-grade markets and in the paint, coatings, plastic and paper industries. This facility exclusively serves the paper industry. The plant is located along the Delaware River a few miles north of the Port of Wilmington.

DuPont Edge Moor reported on six TRI chemicals for 1998, with all reported on-site releases emitted to the air. **Carbonyl sulfide** accounted for 95% of their on-site releases. Carbonyl sulfide is a by-product from the use of sulfur-bearing coke in the process of manufacturing the titanium dioxide from titanium-rich ores.

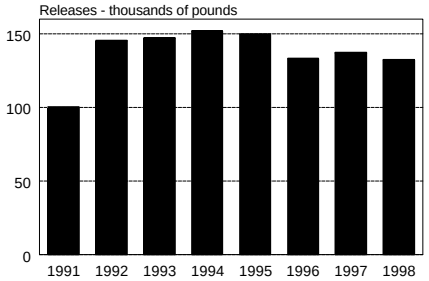
DUPONT EDGE MOOR
TITANIUM DIOXIDE PLANT



Rank #10 - Formosa Plastics - Formosa, located in the Delaware City complex, produces polyvinyl chloride (PVC) resin for bulk sale to other industries that produce PVC end products, such as flooring, carpet backing, upholstery, toys, and gloves.

Formosa reported on three TRI chemicals for 1998. **Vinyl chloride** monomer (VCM) accounted for 87% of their on-site releases. VCM is the primary ingredient for producing PVC and is released as residual (unreacted) monomer during the drying process of the PVC resin. Permits regulate the concentration limit of the residual monomer in the PVC before drying.

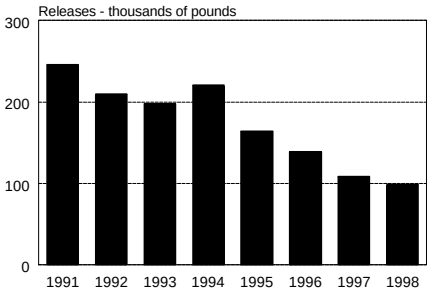
FORMOSA PLASTICS



Rank #11 - Metachem Products - Metachem Products, located in the Delaware City complex, is a producer of chlorinated benzene compounds. These compounds are primarily used by other manufacturers as intermediates in the production of agricultural pesticides, plastics, dyestuffs, and pharmaceuticals. One product, paradichlorobenzene, is repackaged and distributed by others as a moth repellent (moth balls and flakes) or deodorant (urinal blocks). This facility was formerly known as Standard Chlorine of Delaware.

Metachem Products reported on eight TRI chemicals for 1998. The raw materials, chlorine and benzene, were reported, as well as various chlorinated benzene compounds. **Chlorobenzene** and **1,4-dichlorobenzene** (also known as paradichlorobenzene) accounted for over half of their on-site releases for 1998. Process waste streams are passed through pollution control equipment, such as carbon absorption columns and scrubbers, before being released.

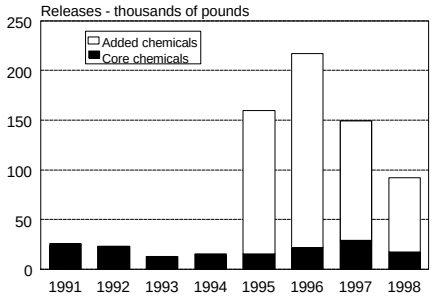
METACHEM PRODUCTS
(formerly Standard Chlorine)



Rank #12 - Rodel - Rodel manufactures polishing pads and slurries for the semiconductor, electronics, and glass industries. Rodel is located south of Newark in the Diamond State Industrial Park.

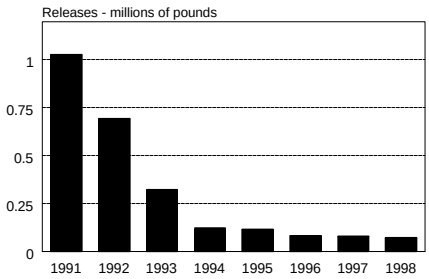
Rodel reported on four TRI chemicals for 1998. **N,N-Dimethylformamide** (DMF), used as a solvent carrier vehicle in the polishing pad manufacturing process, accounted for 81% of their on-site releases.

RODEL



Releases of DMF mostly occur through evaporation from the coating and washing process. Over 95% of the DMF remaining in the aqueous wash is recycled through distillation for reuse in the process.

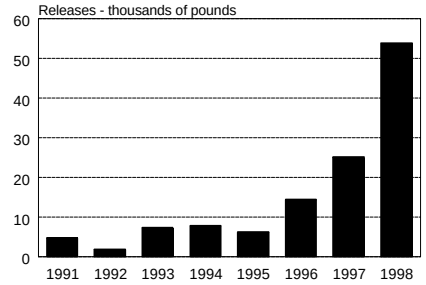
CIBA SPECIALTY CHEMICALS



Rank #13 - Ciba Specialty Chemicals - Ciba, located in Newport, manufactures a family of red shade pigments. These pigments are used in a variety of automobile paints, plastics, fibers, and inks.

Ciba reported on six TRI chemicals for 1998, with all reported on-site releases to the air. Nearly all of their releases were attributable to **methanol**. Methanol is generated during the synthesis process and is then used as a solvent during manufacturing. The methanol is removed by distillation. The pigment is subsequently dried and finished to a powder for final sale.

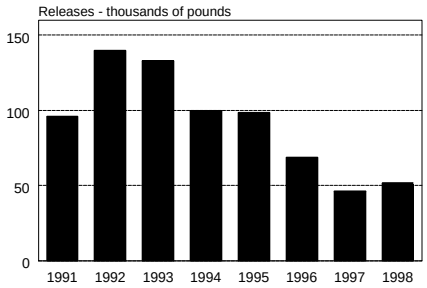
NANTICOKE HOMES



Rank #14 – Nanticoke Homes – Nanticoke Homes, located a mile north of Greenwood on Route 13, produces factory-manufactured homes and custom decorative moldings for use in their homes as well as for sale to the public.

Nanticoke Homes reported on four chemicals for 1998, with all reported releases to the air. Three of the four chemicals are solvents that are contained within the paints and caulking that are applied to the manufactured homes. One chemical, **ethylene glycol**, is used in a water-based paint and accounted for 61% of their reported on-site releases.

REICHHOLD



Rank #15 - Reichhold - Reichhold is located two miles south of Cheswold. Reichhold produces emulsion polymers, sometimes referred to as latex. These products, which are sold in bulk liquid form, are used in the manufacture of paper, carpets, textiles, high performance gloves, coatings, and adhesives.

Most of the twelve TRI chemicals that were reported by Reichhold in 1998 are raw materials that are reacted to form the emulsion polymers. Residual (unreacted) monomers are processed in pollution control equipment before venting to the atmosphere. Over half of their on-site releases were attributable to **1,3-butadiene.**

Off-site Transfers

Figure 6 provides the relative percentages of the various methods for handling the waste that was reported as being sent off-site for further waste management. Two-thirds of all transfers were sent off-site to be recycled. Recycling is a preferred waste management method to treatment or disposal. Amounts sent to publicly-owned treatment works are included in off-site transfers for treatment.

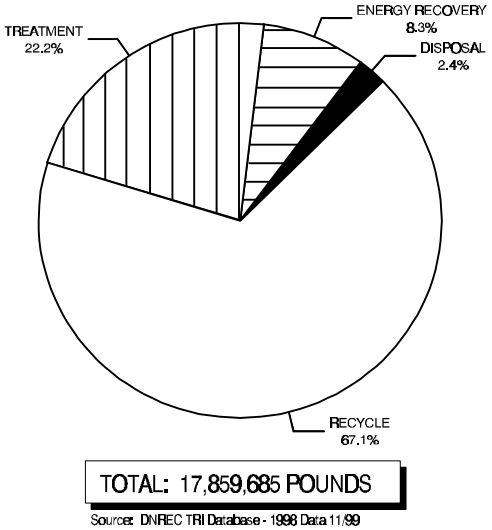
Wastes sent off-site are transported via roads, railways, and

pipelines, through neighboring communities, to other facilities within and outside Delaware. When processed at these facilities, some of the chemicals in the wastes may be released to the environment.

Nineteen percent of all TRI chemicals transferred as wastes were sent to another facility in Delaware, with nearly all of these intra-state transfers being sent to the Wilmington wastewater treatment plant (WWTP.) The remaining 81% of TRI chemicals sent off-site in wastes were transferred out of Delaware to 20 different states and two Canadian provinces, including sites as far away as Arizona and Texas.

FIGURE 6

STATEWIDE OFF-SITE TRANSFERS



Receiving TRI Chemicals in Wastes

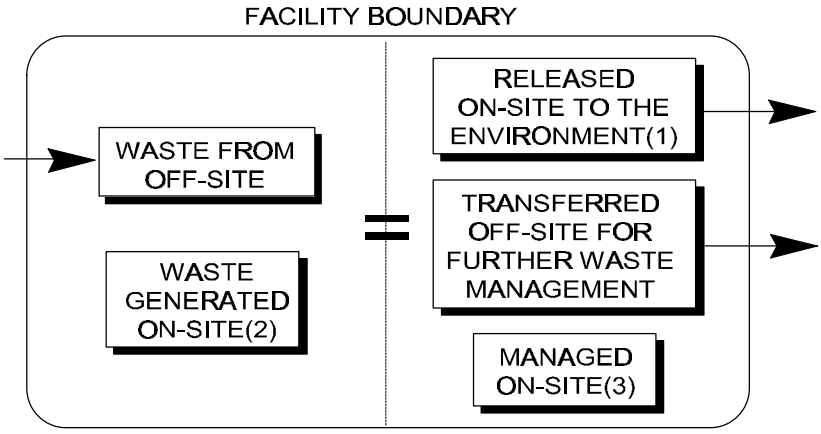
When a facility provides off-site transfer data under TRI, it also indicates the off-site location that receives the waste. Table 8 provides the total amount of reported TRI chemicals in wastes received by Delaware facilities. These data are separated into

TABLE 8
TRI CHEMICALS IN WASTES RECEIVED
BY DELAWARE FACILITIES FOR 1998
(in pounds)

Receiving Facility	From Delaware Facilities (1)	From Out-of-state Facilities (2)	Total Received
International Petroleum Corporation	2	7,418,309	7,418,311
Wilmington WWTP	3,277,628	3,200	3,280,828
DuPont Experimental Station	1,200	945,567	946,767
Capitol Environmental Services	0	663,476	663,476
Clean Earth	0	180,969	180,969
Kent County WWTP	52,986	0	52,986
DSWA Cherry Island Landfill	32,524	0	32,524
Uniqema	20,270	0	20,270
DSWA Pigeon Point	18,863	0	18,863
General Chemical	11,506	1,900	13,406
Ashworks	0	13,000	13,000
M.L. Joseph Construction	11,827	0	11,827
Diamond State Recycling	11,120	0	11,120
Industrial Resource Network	342	1,300	1,642
Seaford WWTP	1,369	0	1,369
MOT WWTP	1,193	0	1,193
DSWA Sandtown Landfill	1,183	0	1,183
Delaware Recyclable Products	731	0	731
United Refrigeration	189	0	189
First State Steel Drum	86	0	86
Harvey & Harvey	0	57	57
ACM Services	0	40	40
Delmarva Power Indian River	5	0	5
HazMat Management Team	0	5	5
Total	**3,443,024**	**9,227,823**	**12,670,847**

(1) Source: DNREC TRI Database - 1998 Data 11/99.
(2) Source: U.S. EPA 1998 TRI Data Run 12/19/99.

FIGURE 7
TOTAL WASTE - FLOW DIAGRAM



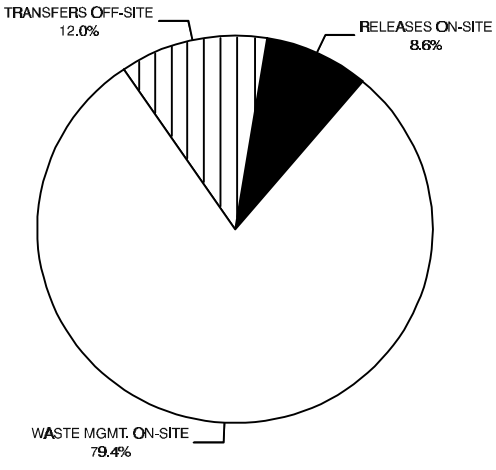
(1) SOME RELEASES TO LAND MAY NOT MIGRATE BEYOND THE FACILITY BOUNDARY, SUCH AS THE DISPOSAL OF WASTE IN A LINED LANDFILL.
(2) WASTE GENERATED FROM A CATASTROPHIC RELEASE OR REMEDIAL ACTION THAT IS SUBSEQUENTLY MANAGED ON-SITE (AS OPPOSED TO BEING RELEASED TO THE ENVIRONMENT OR TRANSFERRED OFF-SITE) IS NOT REPORTED UNDER TRI.
(3) THROUGH RECYCLING, ENERGY RECOVERY, OR TREATMENT.

waste from Delaware TRI facilities and waste from out-of-state TRI facilities. TRI reports from out-of-state facilities are not sent to DNREC, thus data on waste received by Delaware facilities from out-of-state facilities must be obtained from EPA. Most facilities in Delaware that receive TRI-reported waste do not themselves report under TRI.

The top receiver of reported TRI chemicals in wastes is International Petroleum Corporation (IPC), located in Wilmington. IPC provides waste oil recycling and treatment services. Twenty-three out-of-state facilities reporting under TRI sent waste to IPC. The Wilmington WWTP received the second largest amount of reported TRI chemicals in wastes. Fourteen Delaware facilities and one out-of-state facility reported sending waste to the Wilmington WWTP. The DuPont Experimental Station received the third largest amount of reported TRI chemicals in wastes, from eight regional DuPont facilities. The Experimental Station thermally treats these wastes in their hazardous waste incinerator.

FIGURE 8

STATEWIDE TRI CHEMICAL WASTE



TOTAL: 149,009,313 POUNDS

Source: DNREC TRI Database - 1998 Data 11/99

Total Waste

As reported under TRI, the combined amount of a TRI chemical in waste generated on-site and in waste brought from off-site for further waste management represents the total amount of a TRI chemical managed as waste by the facility. Total waste also equals the sum of on-site releases, off-site transfers, and amounts managed on-site. Figure 7 provides a flow diagram of waste through a facility. Figure 8 provides the relative percentages of the total statewide amount of TRI chemicals reported that are released on-site, transferred off-site, and managed on-site. As can be seen in Figure 8, the majority of TRI chemicals in waste never leave the facility, but rather are managed on-site through recycling, energy recovery, or treatment, as shown in Figure 9.

Figure 10 illustrates the top 15 chemicals in terms of total waste statewide. The top chemical, hydrochloric acid, has been reportable only in the aerosol form since the

1995 reporting year. DuPont Edge Moor and Metachem Products reported treating on-site 25 million pounds and 4 million pounds of hydrochloric acid aerosol, respectively. Both facilities indicated nearly 100% removal of the aerosol from the air stream through the use of scrubbers. Delmarva Power Indian River reported nearly 3 million pounds of hydrochloric acid released to the air, and Delmarva Power Edge Moor and First State Power Management each reported over one million pounds of hydrochloric acid emissions.

Methanol ranked second in terms of total waste statewide. Motiva Enterprises reported the on-site treatment of 17 million pounds of methanol in their wastewater treatment plant. Ciba Specialty Chemicals transferred nearly 2 million pounds of methanol to the Wilmington wastewater treatment plant and transferred another 1.7 million pounds off-site to be recycled. Ammonia ranked third due to the 14 million pounds that Motiva Enterprises reported as recovered for energy on-site.

Figure 11, on the next page, illustrates the top 15 facilities in terms of total waste statewide. A complete list of 1998 wastes managed on-site and transferred off-site is provided by chemical in Appendix D and by facility in Appendix F.

FIGURE 9

STATEWIDE ON-SITE WASTE MANAGEMENT

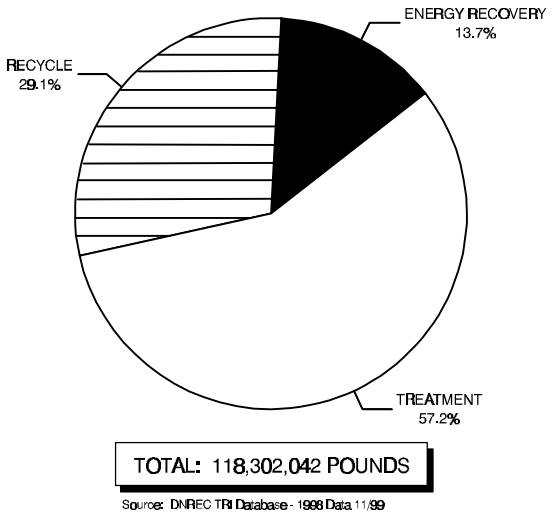


FIGURE 10

TOTAL WASTE - TOP 15 CHEMICALS

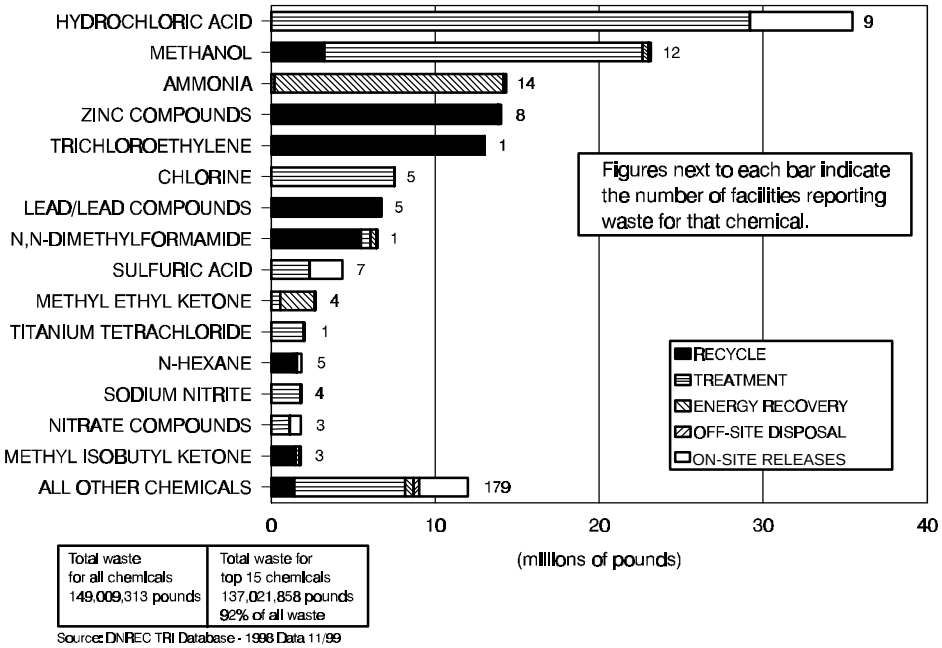
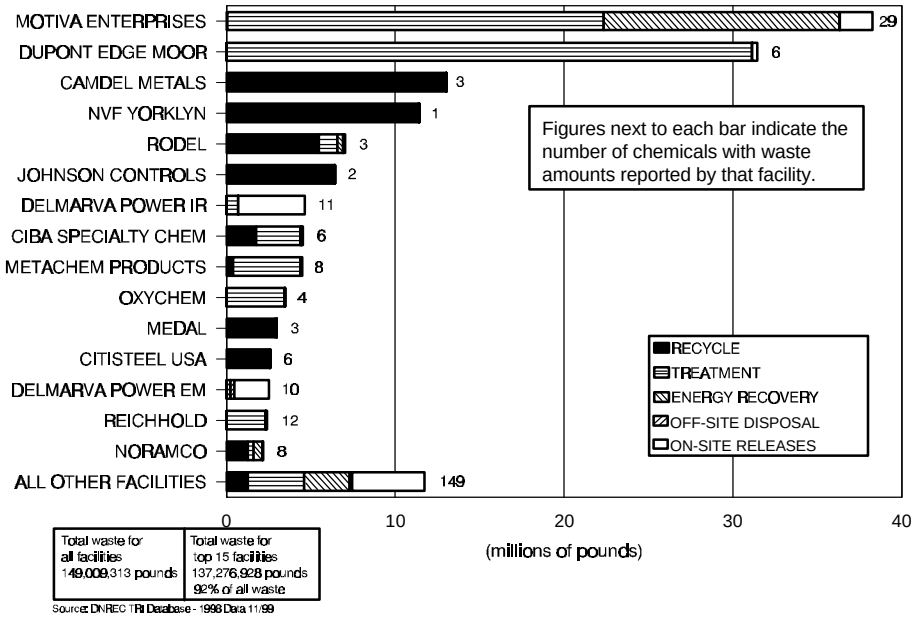


FIGURE 11
TOTAL WASTE - TOP 15 FACILITIES



TREND ANALYSES

In the two previous Delaware TRI data summaries for data years 1996 and 1997, trend analyses of on-site releases and total waste were presented utilizing the base year of 1991. On-site waste management activities and off-site transfers for recycling and energy recovery were added to the TRI reporting requirements for 1991 and beyond under the Pollution Prevention Act. Thus, 1991 had been chosen as the base year for those analyses.

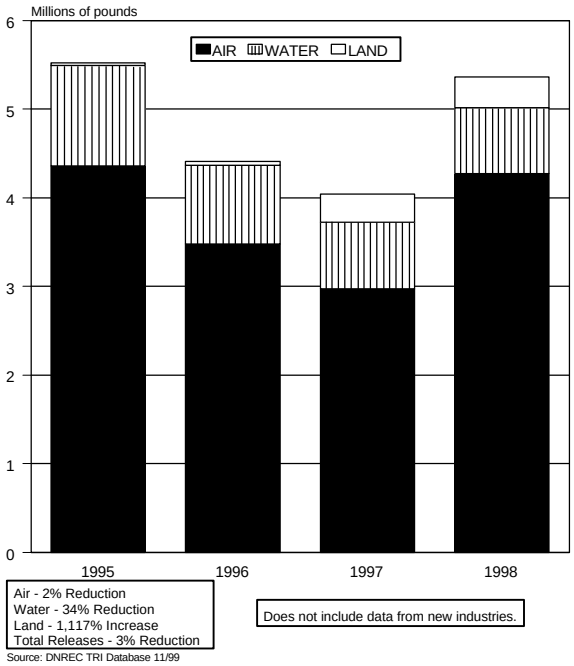
This report will present trend analyses using two different base years. The first analysis utilizes 1995 as the base year and the data presented in Table 9. Since 1995, very few changes to the TRI list of chemicals have occurred. Thus, these charts include all data except from the newly-added industries. The second analysis utilizes 1991

TABLE 9
TRI DATA SUMMARY - 1995 TO 1998 (1)
(in pounds)

Report Year	1995	1996	1997	1998 Manu-facturing
No. of Facilities	74	74	71	69
No. of Form Rs	217	207	228	232
No. of Form As	32	40	35	36
No. of Chemicals	87	94	99	91
On-site Releases				
Air	4,359,810	3,480,969	2,975,579	4,270,398
Water	1,130,298	887,274	747,709	747,214
Land	28,508	42,249	317,103	346,959
Total Releases	**5,518,616**	**4,410,492**	**4,040,391**	**5,364,571**
% change from 1995	NA	-20.1%	-26.8%	-2.8%
Off-site Transfers				
POTWs (2)	3,270,800	4,574,346	4,353,155	3,333,068
Recycle	17,131,373	10,054,483	10,541,662	11,981,086
Energy Recovery	2,427,102	1,173,331	1,657,940	1,489,982
Treatment	914,654	1,299,238	690,154	632,119
Disposal	93,368	123,717	177,476	159,208
Total Transfers	**23,837,297**	**17,225,115**	**17,420,387**	**17,595,463**
On-site Waste Mgmt.				
Recycle	29,000,208	29,782,121	32,896,062	34,449,050
Energy Recovery	332,834	219,184	19,255,280	16,155,665
Treatment	55,010,904	50,920,060	68,642,233	66,770,660
Total On-site Mgmt.	**84,343,946**	**80,921,365**	**120,793,575**	**117,375,375**
Total Waste	**113,699,859**	**102,556,972**	**142,254,353**	**140,335,409**

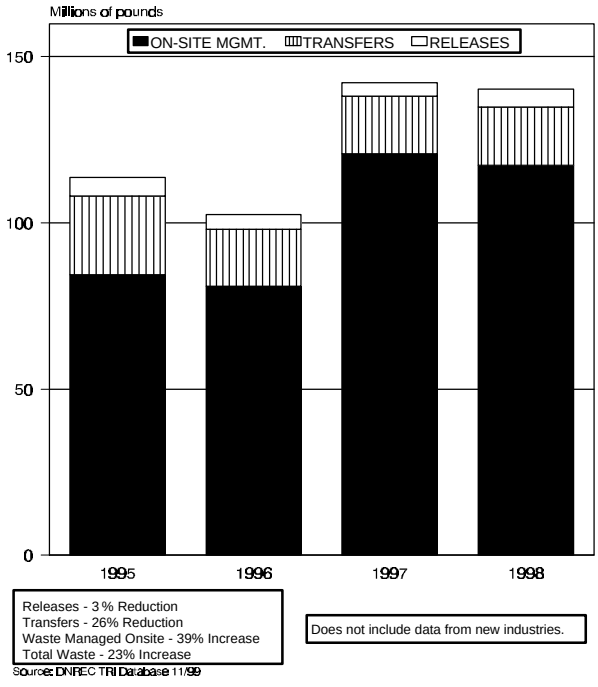
Source: DNREC TRI Database 11/99
(1) Does not include data reported by the new industries
(2) Publicly-owned Treatment Works

FIGURE 12
TOTAL ON-SITE RELEASES
1995 to 1998



Source: DNREC TRI Database 11/99

FIGURE 13
TOTAL WASTE - 1995 to 1998



Source: DNREC TRI Database 11/99

as the base year, as in previous reports. This analysis allows the user to determine what long-term progress has been made by Delaware facilities for a consistently-reportable list of chemicals over eight years. Data for chemicals that were added or modified since 1991, however, are not included. **Data from facilities within the industries reporting for the first time this year are not included in any of the trend analyses.**

Figure 12 illustrates the trend of on-site releases from manufacturing facilities since 1995. This chart includes data from the 1995 chemical list expansion, and modified chemicals, such as hydrochloric and sulfuric acids, which were qualified to include aerosol forms only. From 1997 to 1998, on-site releases increased by 33%. This increase is due to the large increase in sulfuric acid emissions reported by Motiva Enterprises and the increased air emissions reported by DaimlerChrysler, as previously discussed in their respective facility descriptions. Overall, onsite releases decreased by 3% between 1995 and 1998. However, if sulfuric acid emissions reported by Motiva are excluded, statewide releases decreased by 28% since 1995.

Figure 13 illustrates the trend of total waste from manufacturing facilities since 1995. From 1996 to 1997, on-site waste management increased by 40 million pounds. This was due largely to the change in reporting by Motiva Enterprises, which reported the on-site waste management of 38 million pounds for 1997, whereas in 1996 reported less than 300,000 pounds. This increase in on-site waste management by Motiva was the result of new data and changes in calculating methods. Total waste increased by 23% between 1995 and 1998. However, if data reported by Motiva is excluded, total waste decreased by 8.5% since 1995.

Figure 14 illustrates the trend of on-site releases since 1991. Statewide reported TRI releases of consistently-reportable chemicals decreased 64% since 1991. While a steady decrease in releases had been achieved from 1991 to 1996, reported releases since then have remained relatively constant. An increase in the amount of land releases by Motiva Enterprises in 1997 and an increase in the amount of air releases from DaimlerChrysler in 1998 (see DaimlerChrysler's

facility description on page 16 for details) contributed to this recent trend.

Figure 15 illustrates the trend of statewide total waste since 1991. The amount of total waste has changed from one year to the next, due to a significant change in reporting by a few facilities each year. From 1991 to 1992, the amount of TRI chemicals in wastes managed on-site decreased by 15 million pounds because the NVF Yorklyn facility, which had reported recycling 23 million pounds in 1991, reported only 10 million pounds in 1992.

From 1992 to 1993, off-site transfers for recycling increased by 7.8 million pounds. Although several facilities contributed to this increase, the largest increase was due to Johnson Controls transferring 5 million pounds of lead compounds off-site for recycling that previously had been recycled on-site.

From 1995 to 1996, off-site transfers decreased by nearly 7 million pounds primarily because of a change in reporting by Citisteel USA. Prior to 1996, Citisteel reported metals that were contained in steelmaking slag as being recycled when the slag was used as construction aggregate. Citisteel, however, received guidance from the U.S. EPA, through the Steel Manufacturers Association, that this activity is not considered recycling under TRI, since the metals are not reclaimed from the slag. Therefore, since 1996, Citisteel has not reported the metals contained in the slag as being recycled.

From 1996 to 1997, on-site treatment increased by more than 15 million pounds, due largely to the change in reporting of methanol by Motiva Enterprises.

While on-site releases have decreased by 64% since 1991, total waste has increased by 5% and off-site transfers have increased by over 50% over the same time period.

Trend of Releases for Carcinogens

Table 3, on page 6, is a listing of all TRI chemicals reported in Delaware for 1998 that are identified by the International Agency for Research on Cancer as a known or suspected carcinogen. From 1991 to 1998,

FIGURE 14
TOTAL ON-SITE RELEASES
1991 to 1998

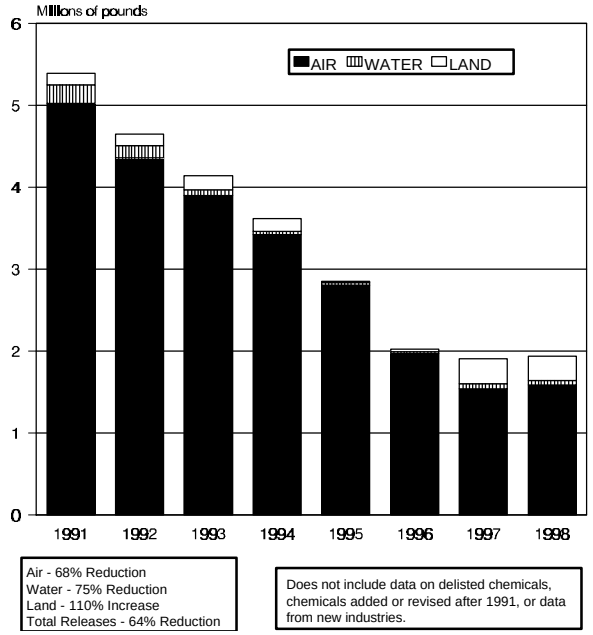
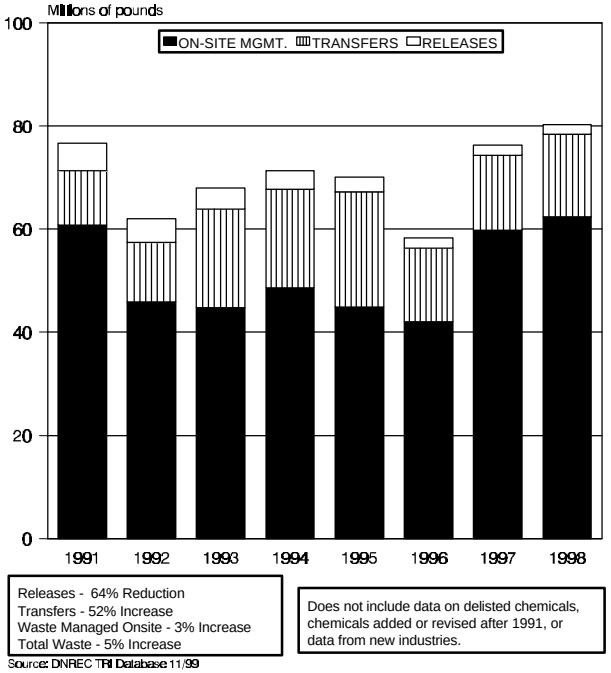


FIGURE 15
TOTAL WASTE - 1991 to 1998



on-site air releases of consistently-reportable known or suspected carcinogens have decreased by 76% (from 1.32 million pounds in 1991 to 313,000 pounds in 1998.) This reduction in releases to air of carcinogens is greater than the 68% reduction of all TRI-reported releases to air during the same time period. This analysis excludes 32,000 pounds of carcinogenic air releases reported for 1998 by the new industries, and 75,000 pounds of carcinogenic air releases reported for 1998 on chemicals added to TRI reporting since 1991.

From 1995 to 1998, on-site air releases of known or suspected carcinogens have decreased by 43%, while all reported releases to air reported for the same time period have decreased by only 2%. This is due largely to the increase in reporting of sulfuric acid aerosol (which is not a known or suspected carcinogen) by Motiva Enterprises for 1998.

For most years between 1991 and 1998, the statewide amount of releases of carcinogens to water or land did not exceed 1,000 pounds. Due to the reporting of nickel compounds by Motiva Enterprises for 1998, however, releases to water and land of carcinogens have increased since 1991. Excluding the data from Motiva Enterprises, no clear trend is evident for releases of carcinogens to water or land.

ADDITIONAL RESOURCES

DNREC is responsible for collecting, processing, and distributing information submitted by Delaware facilities under the TRI program. Additional information not contained in this report is available to the public through the EPCRA Reporting Program located within DNREC.

Access to the TRI Files - The reports submitted by facilities are available for review at DNREC's Air Quality Management Office located at 156 South State Street in Dover from 8 a.m. to 4 p.m., Monday through Friday. Photocopies may be obtained for a modest fee.

Information Requests - EPCRA staff can take requests by phone to provide information and data on individual facilities. TRI information can be supplied by mail, fax, electronic mail, or on a computer disk. Custom reports can also be generated. Call the TRI Coordinator at (302) 739-4791 during business hours.

Chemical Data Fact Sheets - A two-page fact sheet is available for most TRI chemicals reported in Delaware and contains information on chemical characteristics, health hazards, and ecological effects. These fact sheets were prepared by the EPCRA Reporting Program from information obtained through EPA's more lengthy TRI chemical fact sheets. The two-page fact sheets are available upon request.

Delaware EPCRA Web Pages - Release, transfer, and on-site waste management data from the DNREC TRI database, and other EPCRA data, are available through the "Public Information" link on Delaware's EPCRA web pages. Data searches may be performed by facility, chemical, and geographic area (county, zip code, or city.) Information to assist facilities with compliance is also provided through this site.

www2.state.de.us/serc

EPA's TRI Home Page – The TRI home page provides information on the many facets of the TRI program at EPA, including what's new, a current list of reportable chemicals, reporting forms, state and federal program contacts, and various guidance documents available for downloading. This website has many links to other EPA and non-EPA sites associated with TRI.

www.epa.gov/opptintr/tri

Envirofacts Electronic Warehouse - Envirofacts is an EPA-developed website that provides public access to multiple environmental databases, including TRI. Links can be made to data about hazardous waste, water permits, risk management plans, drinking water, Superfund sites, and more. On-line queries allow the user to retrieve data and create reports, as well as generate maps.

www.epa.gov/enviro

TOXICS RELEASE INVENTORY

www.rtk.net

Right-to-know Network – Searchable nationwide TRI data are available through RTKNet. The RTKNet was established by two non-profit organizations to provide access to TRI and chemical data, link TRI with other environmental data, and exchange information among public interest groups.

www.epa.gov/ opptintr/env_ind

Risk-Screening Environmental Indicators - This model was developed by EPA's Office of Pollution Prevention & Toxics as a risk screening tool which provides a relative comparison of TRI releases. This application is available on CD-ROM or through the Internet.

www.scorecard.org

Environmental Defense Fund Scorecard - The EDF Scorecard combines scientific, geographic, technical, and legal information from many databases (with emphasis on TRI) to enable users to produce detailed local reports on toxic chemical pollution. Chemical profiles and a map generator are also available through the Scorecard.

1998 Delaware Air Quality Report - The annual air quality report is prepared by the Air Surveillance Branch of DNREC. This report presents data gathered from a statewide network of air monitoring stations, and includes analyses, trends, and other information regarding Delaware's ambient air quality. For a copy of the report, or for more information, please call (302) 323-4542.

Toxics Release Inventory Public Data Release - EPA's annual TRI report. It covers information nationwide and provides a good perspective on how Delaware compares to other states. The latest version of this report is available for review at the DNREC office at 156 South State Street in Dover or can be obtained by calling the EPCRA Information Hotline at 1-800-535-0202.

Questions or comments regarding TRI are welcome. Please direct questions, comments, or requests to:

TRI Coordinator
EPCRA Reporting Program
Air Quality Management Section, DNREC
156 South State Street
Dover, DE 19901
Tel. (302) 739-4791, Fax (302) 739-3106
e-mail: dfees@dnrec.state.de.us

WHAT IS COMMUNITY RIGHT-TO-KNOW?

TOXICS RELEASE INVENTORY

Emergency Planning and Community Right-to-Know Act

The Federal Emergency Planning and Community Right-to-Know Act (EPCRA), was enacted by Congress within the Superfund Amendments and Reauthorization Act of 1986 in response to mounting concerns regarding public safety and the preparedness of communities to deal with emergencies involving chemicals. Dramatic and fatal incidents in the past demonstrate that the general public, businesses, and planning and response organizations need information regarding hazardous chemicals to prepare for and respond to such emergencies. In 1991 Delaware established its own EPCRA legislation which enhanced the federal requirements.

Emergency Planning

Each state was required to establish a State Emergency Response Commission (SERC), to oversee planning efforts. The SERC must appoint Local Emergency Planning Committees (LEPC), which in turn develop emergency response plans for their respective districts. In Delaware, the SERC is chaired by the Secretary of the Department of Public Safety. Emergency planning districts have been established in each county and for the City of Wilmington. Facilities having specifically identified Extremely Hazardous Substances above established threshold quantities are required to notify their LEPC. These facilities are the primary focus of planning activities.

Emergency Release Notification

In the event of an accidental chemical release above an established amount, a facility is required to provide immediate notification. A follow-up written report is also required to detail the sequence of events, explain actual response actions, and identify any known or anticipated health risks associated with the release.

Hazardous Chemical Reporting

Under U.S. Occupational Safety Health Administration regulations, facilities are required to maintain a Material Safety Data Sheet (MSDS) for each chemical on-site. Under EPCRA, facilities are required to submit a list of their MSDSs for hazardous chemicals on-site above specific threshold amounts. This list must be updated as new chemicals are brought on-site. In addition, facilities having such chemicals are required to file Hazardous Chemical Inventory Reports annually by March 1. These reports, also known as Tier II forms, provide information on the identity, hazards, amounts, and locations of reportable chemicals at the facility. These reports are sent to the EPCRA Reporting Program which processes the information for dissemination

to emergency planning and response organizations statewide.

Toxics Release Inventory (TRI) Reporting

Facilities covered under TRI are required to report on-site releases, off-site transfers, and on-site waste management activities related to their use of certain toxic chemicals. This information is compiled and made available to the public. For more information regarding TRI, please refer to the introduction contained in this report.

Risk Management Plans

Additional information regarding hazardous chemicals is available to the public due to the requirements contained within Section 112(r) of the Federal Clean Air Act Amendments of 1990. Section 112(r) stipulates that facilities handling substances with catastrophic potential were required to submit a risk management plan (RMP) to EPA by June 21, 1999. An RMP includes a Aworst-case@ release scenario, a five-year accident history, and a summary of the accidental release prevention program implemented by the facility. The Aworst-case@ release scenario is a modeling exercise that estimates the area that could be affected by a catastrophic release and describes the populations that may be affected.

The information contained in the RMPs build upon the right-to-know principles of EPCRA by making the consequence of a worst-case release and five-year accident history available to local communities, emergency planners, and other stakeholders. By making this information available, facilities could be asked by the media or concerned citizens to explain the programs that they use to prevent catastrophic releases of regulated substances. EPA is trying to encourage this communication to further reduce the risk of a catastrophic release. This is similar to the way public knowledge of chemical releases to the environment through the availability of TRI data has led industry to reduce its toxic releases.

Within Delaware, the Extremely Hazardous Substances Risk Management Act, originally passed in 1988, was amended in 1998 by adopting new federal guidelines that enhance the community right-to-know information. The Accidental Release Prevention (ARP) Program within DNREC is reviewing the RMPs for accuracy and completeness, and will use them in their on-going efforts to ensure that appropriate accidental release prevention programs have been implemented. For more information on accidental release prevention, please refer to the ARP website at http://www.dnrec.state.de.us/air/aqm_page/arp.htm.

APPENDIX B

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

AGRILINK FOODS
RAILROAD AVENUE
BRIDGEVILLE, DE 19933
PUBLIC CONTACT: STEVEN WEST
TELEPHONE: 302-337-8206
COUNTY: SUSSEX

AIR LIQUIDE AMERICA
WRANGLE HILL ROAD
DELAWARE CITY, DE 19706
PUBLIC CONTACT: DENNIS MUCHA
TELEPHONE: 713-868-0508
COUNTY: NEW CASTLE

ALLEN PETROLEUM
SOUTH PORTER STREET
SEAFORD, DE 19973
PUBLIC CONTACT: ROBERT W. ALLEN
TELEPHONE: 302-629-9428
COUNTY: SUSSEX

ALLEN'S MILLING
ROUTE 13A
DELMAR, DE 19940
PUBLIC CONTACT: SCOTT LEE
TELEPHONE: 302-846-9511
COUNTY: SUSSEX

ALLIEDSIGNAL
6100 PHILADELPHIA PIKE
CLAYMONT, DE 19703
PUBLIC CONTACT: ROBERT SAVARESE
TELEPHONE: 302-791-6745
COUNTY: NEW CASTLE

ALLOY SURFACES
100 LOCKE ROAD
WILMINGTON, DE 19809-3513
PUBLIC CONTACT: L. STEPHEN BOWERS
TELEPHONE: 610-497-7979
COUNTY: NEW CASTLE

AMERICAN MINERALS
301 PIGEON POINT ROAD
NEW CASTLE, DE 19720
PUBLIC CONTACT: WILLIAM D. HEESTAND
TELEPHONE: 606-836-5600
COUNTY: NEW CASTLE

AMETEK-HAVEG DIVISION
900 GREENBANK ROAD
WILMINGTON, DE 19808-5906
PUBLIC CONTACT: RICHARD H. COPE
TELEPHONE: 302-995-0400
COUNTY: NEW CASTLE

ARLON
1100 GOVERNOR LEA ROAD
BEAR, DE 19701
PUBLIC CONTACT: ROBERT M. CARINI
TELEPHONE: 302-834-2100
COUNTY: NEW CASTLE

BARCROFT
40 CAPE HENLOPEN DRIVE
LEWES, DE 19958-0481
PUBLIC CONTACT: ROBERT E. PALMER
TELEPHONE: 302-645-7761
COUNTY: SUSSEX

BRANDYWINE COMPOUNDING
1101 ROSEMONT AVENUE
WILMINGTON, DE 19802
PUBLIC CONTACT: STEVE ROBINSON
TELEPHONE: 302-777-6309
COUNTY: NEW CASTLE

CAMDEL METALS
ROUTE 10 VEPCO INDUSTRIAL PARK
CAMDEN, DE 19934
PUBLIC CONTACT: MARK JON SCHEIDECKER
TELEPHONE: 610-539-3900
COUNTY: KENT

CARL KING
1400 E. LEBANON ROAD
DOVER, DE 19901
PUBLIC CONTACT: RANDY WAYNE
TELEPHONE: 301-322-3111
COUNTY: KENT

CHLORAMONE
1645 RIVER ROAD
DELAWARE CITY, DE 19706-0294
PUBLIC CONTACT: CHARLES G. MCCUEN
TELEPHONE: 800-323-8258
COUNTY: NEW CASTLE

Source: DNREC TRI Database 11/99

APPENDIX B

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

CHROME DEPOSIT		**PUBLIC CONTACT:** CHARLES BUTLER
9 TYLER WAY		**TELEPHONE:** 302-368-7525
NEWARK, DE	19713	**COUNTY:** NEW CASTLE
CIBA SPECIALTY CHEMICALS		**PUBLIC CONTACT:** PHILIP KING
205 SOUTH JAMES STREET		**TELEPHONE:** 302-992-5600
NEWPORT, DE	19804-2490	**COUNTY:** NEW CASTLE
CITISTEEL USA		**PUBLIC CONTACT:** DANA A. LE SAGE
4001 PHILADELPHIA PIKE		**TELEPHONE:** 302-792-5400
CLAYMONT, DE	19703-2794	**COUNTY:** NEW CASTLE
D&B INDUSTRIAL GROUP		**PUBLIC CONTACT:** BETTY ADKINS
2-4 CEDAR CREEK AVENUE		**TELEPHONE:** 302-855-0585
GEORGETOWN, DE	19947	**COUNTY:** SUSSEX
DAIMLERCHRYSLER		**PUBLIC CONTACT:** JAMES A. WOLFE
550 SOUTH COLLEGE STREET		**TELEPHONE:** 302-453-5201
NEWARK, DE	19713-1383	**COUNTY:** NEW CASTLE
DELMARVA POWER EDGE MOOR		**PUBLIC CONTACT:** MARY R. RUCCI
200 HAY ROAD		**TELEPHONE:** 302-429-3334
WILMINGTON	19809	**COUNTY:** NEW CASTLE
DELMARVA POWER INDIAN RIVER		**PUBLIC CONTACT:** MARY R. RUCCI
ROUTE 332, BURTON ISLAND ROAD		**TELEPHONE:** 302-429-3334
MILLSBORO	19966-0408	**COUNTY:** SUSSEX
DENTSPLY/CAULK MAIN		**PUBLIC CONTACT:** SALLY PAULL
38 WEST CLARKE AVENUE		**TELEPHONE:** 302-422-4511
MILFORD, DE	19963-0359	**COUNTY:** SUSSEX
DENTSPLY/CAULK WEST		**PUBLIC CONTACT:** SALLY PAULL
779 EAST MASTEN CIRCLE		**TELEPHONE:** 302-422-4511
MILFORD, DE	19963-0359	**COUNTY:** KENT
DUPONT EDGE MOOR		**PUBLIC CONTACT:** LEONARD J. FASULLO
104 HAY ROAD		**TELEPHONE:** 302-761-2298
EDGE MOOR, DE	19809	**COUNTY:** NEW CASTLE
DUPONT HOLLY RUN		**PUBLIC CONTACT:** H. GRANT FOLEY
JAMES & WATER STREETS		**TELEPHONE:** 302-999-6119
NEWPORT, DE	19804-2490	**COUNTY:** NEW CASTLE
DUPONT SEAFORD		**PUBLIC CONTACT:** DEBORAH STERNDALE
400 WOODLAND ROAD		**TELEPHONE:** 302-629-1650
SEAFORD, DE	19973	**COUNTY:** SUSSEX
E-A-R SPECIALTY COMPOSITES		**PUBLIC CONTACT:** GREG FREDRICK
650 DAWSON DRIVE		**TELEPHONE:** 302-738-6800
NEWARK, DE	19713	**COUNTY:** NEW CASTLE
FIRST STATE POWER MANAGEMENT		**PUBLIC CONTACT:** DANIEL J. CORRIGAN
1280 W. NORTH STREET		**TELEPHONE:** 302-678-4666
DOVER, DE	19904	**COUNTY:** KENT

Source: DNREC TRI Database 11/99

APPENDIX B

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

FLAIR-NEW CASTLE 344 CHURCHMANS ROAD NEW CASTLE, DE 19720-0667	**PUBLIC CONTACT:** DONNA JENKINS **TELEPHONE:** 302-324-3410 **COUNTY:** NEW CASTLE
FORMOSA PLASTICS 780 SCHOOLHOUSE ROAD DELAWARE CITY, DE 19706-0320	**PUBLIC CONTACT:** LOUIS J. LACORTE **TELEPHONE:** 302-836-2213 **COUNTY:** NEW CASTLE
GAC SEAFORD 1100 NANTICOKE AVENUE SEAFORD, DE 19973	**PUBLIC CONTACT:** JOE CLEMIS **TELEPHONE:** 813-248-2101 **COUNTY:** SUSSEX
GENERAL CHEMICAL 6300 PHILADELPHIA PIKE CLAYMONT, DE 19703-2712	**PUBLIC CONTACT:** CARTER DREVES **TELEPHONE:** 973-515-1814 **COUNTY:** NEW CASTLE
GENERAL MOTORS BOXWOOD & DODSON ROADS WILMINGTON, DE 19804	**PUBLIC CONTACT:** GERRY HOLMES **TELEPHONE:** 810-986-9310 **COUNTY:** NEW CASTLE
HANOVER FOODS ROUTE 6 & DUCKCREEK ROAD CLAYTON, DE 19938	**PUBLIC CONTACT:** DONALD TAYLOR **TELEPHONE:** 302-653-9281 **COUNTY:** KENT
HERCULES RESEARCH CENTER 500 HERCULES ROAD WILMINGTON, DE 19808-1599	**PUBLIC CONTACT:** RICHARD H. MUMMA **TELEPHONE:** 302-995-3154 **COUNTY:** NEW CASTLE
HEWLETT-PACKARD 538 FIRST STATE BOULEVARD NEWPORT, DE 19804	**PUBLIC CONTACT:** JUDITH A. PORTA **TELEPHONE:** 302-633-8111 **COUNTY:** NEW CASTLE
HIRSH INDUSTRIES 1525 MCKEE ROAD DOVER, DE 19904	**PUBLIC CONTACT:** WILLIAM ULMER **TELEPHONE:** 302-678-3454 **COUNTY:** KENT
INSTEEL WIRE PRODUCTS 800 NEW CASTLE AVENUE WILMINGTON, DE 19801	**PUBLIC CONTACT:** ANTHONY E. SHANNON **TELEPHONE:** 302-656-3121 **COUNTY:** NEW CASTLE
JOHNSON CONTROLS 700 NORTH BROAD STREET MIDDLETOWN, DE 19709	**PUBLIC CONTACT:** RICK A. THOMPSON **TELEPHONE:** 302-378-9885 **COUNTY:** NEW CASTLE
KANEKA 1685 RIVER ROAD DELAWARE CITY, DE 19706-0610	**PUBLIC CONTACT:** RONALD P. PEARCE **TELEPHONE:** 302-836-2150 **COUNTY:** NEW CASTLE
KRAFT FOODS 1250 WEST NORTH STREET DOVER, DE 19904	**PUBLIC CONTACT:** CHRISANNE MORTENSEN **TELEPHONE:** 302-734-6426 **COUNTY:** KENT
MACDERMID 701 INDUSTRIAL DRIVE MIDDLETOWN, DE 19709-1085	**PUBLIC CONTACT:** JOSEPH R. SIMEONE **TELEPHONE:** 302-378-3100 **COUNTY:** NEW CASTLE

Source: DNREC TRI Database 11/99

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

MARBLE WORKS
COUNTY ROAD 631
GREENWOOD, DE 19950
PUBLIC CONTACT: MIKE MARVEL
TELEPHONE: 302-349-5445
COUNTY: SUSSEX

MEDAL
305 WATER STREET
NEWPORT, DE 19804
PUBLIC CONTACT: RALPH A. SCHWENDEMAN
TELEPHONE: 302-999-6090
COUNTY: NEW CASTLE

METACHEM PRODUCTS
745 GOVERNOR LEA ROAD
NEW CASTLE, DE 19720
PUBLIC CONTACT: ROBERT J. TOUHEY
TELEPHONE: 302-834-4536
COUNTY: NEW CASTLE

MFG JUSTIN TANKS
8 CEDAR CREEK AVENUE
GEORGETOWN, DE 19947-0825
PUBLIC CONTACT: EDWARD M. SHORT
TELEPHONE: 302-856-3521
COUNTY: SUSSEX

MOTIVA ENTERPRISES
2000 WRANGLE HILL ROAD
DELAWARE CITY, DE 19706
PUBLIC CONTACT: JOHN F. SKURLA
TELEPHONE: 302-834-6210
COUNTY: NEW CASTLE

MOUNTAIRE FARMS FEEDMILL
11 DAISEY STREET
FRANKFORD, DE 19945
PUBLIC CONTACT: JOHN R. WREN
TELEPHONE: 302-436-8241
COUNTY: SUSSEX

NANTICOKE HOMES
ROUTE 13 SOUTH
GREENWOOD, DE 19950
PUBLIC CONTACT: BRIAN K. HURD
TELEPHONE: 302-349-4561
COUNTY: SUSSEX

NORAMCO
500 SWEDES LANDING ROAD
WILMINGTON, DE 19801
PUBLIC CONTACT: KENNETH COOK
TELEPHONE: 302-652-3840
COUNTY: NEW CASTLE

NVF YORKLYN
1166 YORKLYN ROAD
YORKLYN, DE 19736
PUBLIC CONTACT: JAMES E. JORDAN, JR.
TELEPHONE: 302-239-5281
COUNTY: NEW CASTLE

OCCIDENTAL CHEMICAL
1657 RIVER ROAD
NEW CASTLE, DE 19720-5194
PUBLIC CONTACT: W. DEAN HULSEY
TELEPHONE: 302-834-3810
COUNTY: NEW CASTLE

ORIENT
111 PARK AVENUE
SEAFORD, DE 19973
PUBLIC CONTACT: KURT SCHIMMEL
TELEPHONE: 302-628-1300
COUNTY: SUSSEX

PENINSULA OIL-BLADES
S. MARKET STREET
SEAFORD, DE 19973
PUBLIC CONTACT: JOHN PEIRCE
TELEPHONE: 302-629-3001
COUNTY: SUSSEX

PEPSI-COLA BOTTLING
3501 GOVERNOR PRINTZ BOULEVARD
WILMINGTON, DE 19802-2804
PUBLIC CONTACT: ROBERT A. FALINE
TELEPHONE: 302-761-4504
COUNTY: NEW CASTLE

PERDUE BRIDGEVILLE
ROUTE 2, BOX 3
BRIDGEVILLE, DE 19933
PUBLIC CONTACT: CATHY MIZELLE
TELEPHONE: 252-794-5555
COUNTY: SUSSEX

Source: DNREC TRI Database 11/99

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

PERDUE GEORGETOWN 200 SAVANNAH ROAD GEORGETOWN, DE 19947	**PUBLIC CONTACT:** TITA CHERRIER **TELEPHONE:** 410-860-4407 **COUNTY:** SUSSEX
PERDUE MILFORD 225 NORTH REHOBOTH BOULEVARD MILFORD, DE 19963	**PUBLIC CONTACT:** TITA CHERRIER **TELEPHONE:** 410-860-4407 **COUNTY:** KENT
PERMA-FLEX 375 BELLEVUE ROAD NEWARK, DE 19713	**PUBLIC CONTACT:** CHRIS A. LEDEKER **TELEPHONE:** 302-731-7880 **COUNTY:** NEW CASTLE
PLAYTEX APPAREL RIGLEY STREET DOVER, DE 19904	**PUBLIC CONTACT:** PHILLIP STEWART **TELEPHONE:** 302-674-6159 **COUNTY:** KENT
PLAYTEX PRODUCTS 50 NORTH DUPONT HIGHWAY DOVER, DE 19901	**PUBLIC CONTACT:** SCOTT ZAPOR **TELEPHONE:** 302-678-6455 **COUNTY:** KENT
PPG ARCHITECTURAL FINISHES 1886 LYNNBURY WOODS ROAD DOVER, DE 19904	**PUBLIC CONTACT:** TERRY MCGINNIS **TELEPHONE:** 302-678-9800 **COUNTY:** KENT
PRINTPACK RIVER ROAD & GRANTHAM LANE NEW CASTLE, DE 19720-0110	**PUBLIC CONTACT:** BRAD PAGE **TELEPHONE:** 302-323-4076 **COUNTY:** NEW CASTLE
REICHHOLD 144 FORK BRANCH ROAD CHESWOLD, DE 19936	**PUBLIC CONTACT:** GLENN CARR **TELEPHONE:** 302-736-9165 **COUNTY:** KENT
RITE-OFF 105 PARK AVENUE SEAFORD, DE 19973	**PUBLIC CONTACT:** CINDY KALLAY **TELEPHONE:** 302-628-2100 **COUNTY:** SUSSEX
RODEL 451 BELLEVUE ROAD NEWARK, DE 19713	**PUBLIC CONTACT:** DANA P. THURESSON **TELEPHONE:** 302-366-0500 **COUNTY:** NEW CASTLE
RODEL TECHNICAL CENTER 351 BELLEVUE ROAD NEWARK, DE 19713	**PUBLIC CONTACT:** DANA P. THURESSON **TELEPHONE:** 302-366-0500 **COUNTY:** NEW CASTLE
ROLLER SERVICE 1318 EAST 12TH STREET WILMINGTON, DE 19802	**PUBLIC CONTACT:** JOHN GENTILE **TELEPHONE:** 302-737-5000 **COUNTY:** NEW CASTLE
S.C.JOHNSON POLYMER 100 INDUSTRIAL BOULEVARD SEAFORD, DE 19973	**PUBLIC CONTACT:** JOSEPH G. LIEFBROER **TELEPHONE:** 302-629-6200 **COUNTY:** SUSSEX
SERVICE ENERGY-DOVER 3794 N. DUPONT HIGHWAY DOVER, DE 19901	**PUBLIC CONTACT:** DONALD L. STEINER **TELEPHONE:** 302-422-1631 **COUNTY:** KENT

Source: DNREC TRI Database 11/99

APPENDIX B

TRI FACILITY ADDRESSES AND PUBLIC CONTACTS

TOXICS RELEASE INVENTORY

SERVICE ENERGY-MILFORD	**PUBLIC CONTACT:**	DONALD L. STEINER
CEDAR BEACH ROAD	**TELEPHONE:**	302-422-1631
MILFORD, DE 19963	**COUNTY:**	SUSSEX
SICO	**PUBLIC CONTACT:**	CHARLES E. HURSH
1050 CHRISTIANA AVENUE	**TELEPHONE:**	717-653-1411
WILMINGTON, DE 19801	**COUNTY:**	NEW CASTLE
SPATZ FIBERGLASS	**PUBLIC CONTACT:**	FREDERICK J. HOEY
505 NEW CHURCHMANS ROAD	**TELEPHONE:**	302-322-3311
NEW CASTLE, DE 19720	**COUNTY:**	NEW CASTLE
SPI POLYOLS	**PUBLIC CONTACT:**	TOM SCHMIDT
321 CHERRY LANE	**TELEPHONE:**	302-576-8583
NEW CASTLE, DE 19720	**COUNTY:**	NEW CASTLE
SUNOCO MARCUS HOOK REFINERY	**PUBLIC CONTACT:**	DONALD ZOLADKIEWICZ
GREEN STREET & DELAWARE AVENUE	**TELEPHONE:**	610-859-1038
MARCUS HOOK, PA 19061-0426	**COUNTY:**	DELAWARE
TOWNSENDS	**PUBLIC CONTACT:**	ALLISON DERRICKSON
ROUTE 24	**TELEPHONE:**	302-934-3055
MILLSBORO, DE 19966	**COUNTY:**	SUSSEX
UNIQEMA	**PUBLIC CONTACT:**	ALLAN COLETTA
213, 315 CHERRY LANE	**TELEPHONE:**	302-427-1510
NEW CASTLE, DE 19720	**COUNTY:**	NEW CASTLE
WILMINGTON LEATHER COATINGS	**PUBLIC CONTACT:**	RICHARD PUGLISI
1400 JOHNSON WAY	**TELEPHONE:**	302-326-6900
NEW CASTLE, DE 19720	**COUNTY:**	NEW CASTLE
ZENECA SPECIALTIES	**PUBLIC CONTACT:**	KEENA DAUTLICK
233 CHERRY LANE	**TELEPHONE:**	302-427-1218
NEW CASTLE, DE 19720	**COUNTY:**	NEW CASTLE

Source: DNREC TRI Database 11/99

APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
ACRYLIC ACID	**79-10-7**				
REICHHOLD		1,125	0	0	1,125
CHEMICAL TOTALS		**1,125**	**0**	**0**	**1,125**
ACRYLONITRILE	**107-13-1**				
REICHHOLD		6,231	0	0	6,231
CHEMICAL TOTALS		**6,231**	**0**	**0**	**6,231**
AMMONIA	**7664-41-7**				
AGRILINK FOODS		9,889	0	0	9,889
AIR LIQUIDE AMERICA		33,420	0	0	33,420
ALLIEDSIGNAL		4,820	0	0	4,820
DELMARVA POWER EDGE MOOR		21,861	7	0	21,868
FORMOSA PLASTICS		6,972	0	0	6,972
GENERAL CHEMICAL		1,064	2,100	0	3,164
HANOVER FOODS		27,103	0	0	27,103
KRAFT FOODS		4	0	0	4
MOTIVA ENTERPRISES		340	3,400	0	3,740
PERDUE GEORGETOWN		12,000	120	30	12,150
PERDUE MILFORD		0	0	10	10
REICHHOLD		2,356	0	0	2,356
S.C. JOHNSON POLYMER		1,234	0	0	1,234
TOWNSENDS		4,769	0	13,995	18,764
CHEMICAL TOTALS		**125,832**	**5,627**	**14,035**	**145,494**
ANILINE	**62-53-3**				
CIBA SPECIALTY CHEMICALS		55	0	0	55
ORIENT		2,841	0	0	2,841
CHEMICAL TOTALS		**2,896**	**0**	**0**	**2,896**
ANTIMONY COMPOUNDS	**N010**				
BRANDYWINE COMPOUNDING		0	0	0	0
JOHNSON CONTROLS		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
ARSENIC COMPOUNDS	**N020**				
DELMARVA POWER INDIAN RIVER		2,253	0	35,424	37,677
CHEMICAL TOTALS		**2,253**	**0**	**35,424**	**37,677**
ATRAZINE	**1912-24-9**				
TOWNSENDS		0	0	15,101	15,101
CHEMICAL TOTALS		**0**	**0**	**15,101**	**15,101**
BARIUM	**7440-39-3**				
AMERICAN MINERALS		106	0	0	106
CHEMICAL TOTALS		**106**	**0**	**0**	**106**
BARIUM COMPOUNDS	**N040**				
DAIMLERCHRYSLER (1)		0	0	0	0
DELMARVA POWER EDGE MOOR		5,947	3,038	3,063	12,048
DELMARVA POWER INDIAN RIVER		10,978	0	234,557	245,535
DUPONT SEAFORD		19,300	0	3,100	22,400
CHEMICAL TOTALS		**36,225**	**3,038**	**240,720**	**279,983**
BENZENE	**71-43-2**				
ALLEN PETROLEUM (1)		0	0	0	0
CARL KING (1)		0	0	0	0
DAIMLERCHRYSLER		111	0	0	111
METACHEM PRODUCTS		14,108	5	0	14,113
MOTIVA ENTERPRISES		9,210	83	0	9,293
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SICO (1)		0	0	0	0
CHEMICAL TOTALS		**23,429**	**88**	**0**	**23,517**

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
BIPHENYL	**92-52-4**				
CIBA SPECIALTY CHEMICALS		716	0	0	716
DUPONT SEAFORD		16,500	0	0	16,500
CHEMICAL TOTALS		**17,216**	**0**	**0**	**17,216**
BIS(2-CHLOROETHYL) ETHER	**111-44-4**				
UNIQEMA		83	0	0	83
CHEMICAL TOTALS		**83**	**0**	**0**	**83**
BORON TRIFLUORIDE	**7637-07-2**				
ALLIEDSIGNAL		215	0	0	215
CHEMICAL TOTALS		**215**	**0**	**0**	**215**
1,3-BUTADIENE	**106-99-0**				
MOTIVA ENTERPRISES		1,324	0	0	1,324
REICHHOLD		28,334	0	0	28,334
CHEMICAL TOTALS		**29,658**	**0**	**0**	**29,658**
BUTYL ACRYLATE	**141-32-2**				
REICHHOLD		591	0	0	591
S.C. JOHNSON POLYMER (1)		0	0	0	0
CHEMICAL TOTALS		**591**	**0**	**0**	**591**
N-BUTYL ALCOHOL	**71-36-3**				
DAIMLERCHRYSLER		60,300	0	0	60,300
GENERAL MOTORS		33,058	0	0	33,058
HIRSH INDUSTRIES		10,200	0	0	10,200
MOTIVA ENTERPRISES		0	170	0	170
CHEMICAL TOTALS		**103,558**	**170**	**0**	**103,728**
TERT-BUTYL ALCOHOL	**75-65-0**				
MOTIVA ENTERPRISES (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
CARBONYL SULFIDE	**463-58-1**				
DUPONT EDGE MOOR		290,000	0	0	290,000
CHEMICAL TOTALS		**290,000**	**0**	**0**	**290,000**
CHLORINE	**7782-50-5**				
BARCROFT (1)		0	0	0	0
CHLORAMONE		9	0	0	9
DUPONT EDGE MOOR		2,458	0	0	2,458
METACHEM PRODUCTS		81	0	0	81
OCCIDENTAL CHEMICAL		2,191	0	0	2,191
PLAYTEX PRODUCTS		7	0	0	7
CHEMICAL TOTALS		**4,746**	**0**	**0**	**4,746**
CHLOROALLYL METHENAMINE CHLORIDE (2)	**4080-31-3**				
PPG ARCHITECTURAL FINISHES (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
P-CHLOROANILINE	**106-47-8**				
CIBA SPECIALTY CHEMICALS		76	0	0	76
CHEMICAL TOTALS		**76**	**0**	**0**	**76**
CHLOROBENZENE	**108-90-7**				
METACHEM PRODUCTS		18,894	7	0	18,901
CHEMICAL TOTALS		**18,894**	**7**	**0**	**18,901**
CHLORODIFLUOROMETHANE	**75-45-6**				
FLAIR-NEW CASTLE		10	0	0	10
CHEMICAL TOTALS		**10**	**0**	**0**	**10**
CHLOROETHANE	**75-00-3**				
ALLIEDSIGNAL (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
CHLOROFORM	**67-66-3**				
OCCIDENTAL CHEMICAL		1,719	0	0	1,719
CHEMICAL TOTALS		**1,719**	**0**	**0**	**1,719**
CHLOROMETHANE	**74-87-3**				
ZENECA SPECIALTIES		178	0	0	178
CHEMICAL TOTALS		**178**	**0**	**0**	**178**
CHROMIUM	**7440-47-3**				
CAMDEL METALS		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
CHROMIUM COMPOUNDS	**N090**				
AMERICAN MINERALS		6,400	0	0	6,400
CHROME DEPOSIT		0	0	0	0
CITISTEEL USA		157	1	63	221
DELMARVA POWER EDGE MOOR		1,092	1,518	1,346	3,956
DELMARVA POWER INDIAN RIVER		1,125	830	37,637	39,592
DUPONT HOLLY RUN		787	4	33	824
ORIENT		0	0	0	0
CHEMICAL TOTALS		**9,561**	**2,353**	**39,079**	**50,993**
COPPER	**7440-50-8**				
FLAIR-NEW CASTLE		10	0	0	10
GENERAL MOTORS		7	0	0	7
CHEMICAL TOTALS		**17**	**0**	**0**	**17**
COPPER COMPOUNDS	**N100**				
ALLEN'S MILLING (1)		0	0	0	0
BRANDYWINE COMPOUNDING		0	0	0	0
CITISTEEL USA		155	1	20	176
DELMARVA POWER EDGE MOOR		1,811	10,296	788	12,895
DELMARVA POWER INDIAN RIVER		645	1,425	45,860	47,930
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0
PERDUE BRIDGEVILLE (1)		0	0	0	0
TOWNSENDS (1)		0	0	0	0
ZENECA SPECIALTIES		0	0	0	0
CHEMICAL TOTALS		**2,611**	**11,722**	**46,668**	**61,001**
CRESOL (MIXED ISOMERS)	**1319-77-3**				
MOTIVA ENTERPRISES		0	59	0	59
CHEMICAL TOTALS		**0**	**59**	**0**	**59**
CUMENE	**98-82-8**				
MOTIVA ENTERPRISES		300	0	0	300
CHEMICAL TOTALS		**300**	**0**	**0**	**300**
CYCLOHEXANE	**110-82-7**				
CARL KING (1)		0	0	0	0
CIBA SPECIALTY CHEMICALS		19	0	0	19
MOTIVA ENTERPRISES		730	33	0	763
SICO (1)		0	0	0	0
CHEMICAL TOTALS		**749**	**33**	**0**	**782**
DECABROMODIPHENYL OXIDE	**1163-19-5**				
BRANDYWINE COMPOUNDING		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
1,3-DICHLOROBENZENE	**541-73-1**				
METACHEM PRODUCTS		1,758	10	0	1,768
NORAMCO		400	0	0	400
CHEMICAL TOTALS		**2,158**	**10**	**0**	**2,168**
1,2-DICHLOROBENZENE	**95-50-1**				
METACHEM PRODUCTS		11,616	36	0	11,652

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
CHEMICAL TOTALS		**11,616**	**36**	**0**	**11,652**
1,4-DICHLOROBENZENE	**106-46-7**				
METACHEM PRODUCTS		36,062	107	0	36,169
CHEMICAL TOTALS		**36,062**	**107**	**0**	**36,169**
1,1-DICHLORO-1-FLUOROETHANE	**1717-00-6**				
RITE-OFF		1,800	0	0	1,800
CHEMICAL TOTALS		**1,800**	**0**	**0**	**1,800**
DICHLOROMETHANE	**75-09-2**				
NORAMCO		3,100	0	0	3,100
RITE-OFF		1,182	0	0	1,182
CHEMICAL TOTALS		**4,282**	**0**	**0**	**4,282**
1,2-DICHLOROPROPANE	**78-87-5**				
MOTIVA ENTERPRISES (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
1,3-DICHLOROPROPYLENE	**542-75-6**				
ALLIEDSIGNAL		50	0	0	50
CHEMICAL TOTALS		**50**	**0**	**0**	**50**
DIETHANOLAMINE	**111-42-2**				
MOTIVA ENTERPRISES		0	880	0	880
CHEMICAL TOTALS		**0**	**880**	**0**	**880**
DI(2-ETHYLHEXYL) PHTHALATE	**117-81-7**				
ROLLER SERVICE (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
DIISOCYANATES	**N120**				
DAIMLERCHRYSLER		1	0	0	1
E-A-R SPECIALTY COMPOSITES		20	0	0	20
NANTICOKE HOMES		0	0	0	0
RODEL		2	0	0	2
WILMINGTON LEATHER COATINGS (1)		0	0	0	0
CHEMICAL TOTALS		**23**	**0**	**0**	**23**
DIMETHOATE	**60-51-5**				
TOWNSENDS		0	0	19,975	19,975
CHEMICAL TOTALS		**0**	**0**	**19,975**	**19,975**
N,N-DIMETHYLFORMAMIDE	**68-12-2**				
RODEL		74,668	0	0	74,668
CHEMICAL TOTALS		**74,668**	**0**	**0**	**74,668**
ETHYL ACRYLATE	**140-88-5**				
REICHHOLD		464	0	0	464
S.C. JOHNSON POLYMER (1)		0	0	0	0
CHEMICAL TOTALS		**464**	**0**	**0**	**464**
ETHYLBENZENE	**100-41-4**				
ALLEN PETROLEUM (1)		0	0	0	0
CARL KING (1)		0	0	0	0
DAIMLERCHRYSLER		15,700	0	0	15,700
GENERAL MOTORS		14,003	0	0	14,003
MOTIVA ENTERPRISES		1,790	190	22	2,002
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SICO(1)		0	0	0	0
CHEMICAL TOTALS		**31,493**	**190**	**22**	**31,705**
ETHYLENE	**74-85-1**				
MOTIVA ENTERPRISES		1,018	0	0	1,018
SUNOCO MARCUS HOOK REFINERY		27,200	0	0	27,200

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Source: DNREC 1998 TRI Database 11/99

APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
CHEMICAL TOTALS		**28,218**	**0**	**0**	**28,218**
ETHYLENE GLYCOL	**107-21-1**				
DAIMLERCHRYSLER		400	0	0	400
DELMARVA POWER EDGE MOOR (1)		0	0	0	0
GENERAL MOTORS		0	0	0	0
NANTICOKE HOMES		32,636	0	0	32,636
NORAMCO		0	0	0	0
PPG ARCHITECTURAL FINISHES		1	0	0	1
TOWNSENDS		0	0	12,345	12,345
ZENECA SPECIALTIES		19	0	0	19
CHEMICAL TOTALS		**33,056**	**0**	**12,345**	**45,401**
ETHYLENE OXIDE	**75-21-8**				
SUNOCO MARCUS HOOK REFINERY		3,970	0	0	3,970
UNIQEMA		11,474	0	0	11,474
CHEMICAL TOTALS		**15,444**	**0**	**0**	**15,444**
FORMALDEHYDE	**50-00-0**				
AMETEK-HAVEG DIVISION (1)		0	0	0	0
REICHHOLD		1,965	0	0	1,965
CHEMICAL TOTALS		**1,965**	**0**	**0**	**1,965**
FORMIC ACID	**64-18-6**				
ZENECA SPECIALTIES		57	0	0	57
CHEMICAL TOTALS		**57**	**0**	**0**	**57**
GLYCOL ETHERS	**N230**				
DAIMLERCHRYSLER		176,000	0	0	176,000
GENERAL MOTORS		66,400	0	0	66,400
HIRSH INDUSTRIES		19,003	0	0	19,003
PPG ARCHITECTURAL FINISHES (1)		0	0	0	0
RITE-OFF (1)		0	0	0	0
S.C. JOHNSON POLYMER (1)		0	0	0	0
UNIQEMA		37	0	0	37
ZENECA SPECIALTIES		0	0	0	0
CHEMICAL TOTALS		**261,440**	**0**	**0**	**261,440**
N-HEXANE	**110-54-3**				
ALLEN PETROLEUM (1)		0	0	0	0
ALLIEDSIGNAL		19,775	0	0	19,775
CARL KING (1)		0	0	0	0
MEDAL		12,800	0	0	12,800
MOTIVA ENTERPRISES		4,900	0	1	4,901
PENINSULA OIL-BLADES (1)		0	0	0	0
RITE-OFF		49	0	0	49
SERVICE ENERGY-DOVER (1)		0	0	0	0
SICO (1)		0	0	0	0
TOWNSENDS		269,716	0	0	269,716
CHEMICAL TOTALS		**307,240**	**0**	**1**	**307,241**
HYDROCHLORIC ACID (AEROSOL)	**7647-01-0**				
DELMARVA POWER EDGE MOOR		1,635,619	0	0	1,635,619
DELMARVA POWER INDIAN RIVER		2,980,941	0	0	2,980,941
DUPONT EDGE MOOR		10,403	0	0	10,403
DUPONT SEAFORD		225,000	0	0	225,000
FIRST STATE POWER MANAGEMENT		1,304,287	0	0	1,304,287
KANEKA		2,262	0	0	2,262
METACHEM PRODUCTS		5,652	0	0	5,652
MOTIVA ENTERPRISES		88,000	0	0	88,000
NORAMCO		100	0	0	100
CHEMICAL TOTALS		**6,252,264**	**0**	**0**	**6,252,264**
HYDROGEN FLUORIDE	**7664-39-3**				
DELMARVA POWER EDGE MOOR		74,355	0	0	74,355

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APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
DELMARVA POWER INDIAN RIVER		142,476	0	0	142,476
FIRST STATE POWER MANAGEMENT		157,887	0	0	157,887
GENERAL CHEMICAL		1,282	0	0	1,282
CHEMICAL TOTALS		**376,000**	**0**	**0**	**376,000**
4,4'-ISOPROPYLIDENEDIPHENOL	**80-05-7**				
UNIQEMA		960	0	0	960
CHEMICAL TOTALS		**960**	**0**	**0**	**960**
LEAD	**7439-92-1**				
AMERICAN MINERALS		57	0	0	57
CHEMICAL TOTALS		**57**	**0**	**0**	**57**
LEAD COMPOUNDS	**N420**				
CITISTEEL USA		675	1	35	711
DELMARVA POWER INDIAN RIVER		2,252	986	36,462	39,700
GENERAL CHEMICAL		358	0	17	375
JOHNSON CONTROLS		297	0	0	297
CHEMICAL TOTALS		**3,582**	**987**	**36,514**	**41,083**
MANGANESE	**7439-96-5**				
TOWNSENDS (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
MANGANESE COMPOUNDS	**N450**				
ALLEN'S MILLING (1)		0	0	0	0
AMERICAN MINERALS		5,400	0	0	5,400
CITISTEEL USA		751	4	405	1,160
DAIMLERCHRYSLER		0	0	0	0
DELMARVA POWER EDGE MOOR		933	21,261	3,836	26,030
DELMARVA POWER INDIAN RIVER		1,588	42	63,537	65,167
MOTIVA ENTERPRISES		190	0	28,800	28,990
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0
PERDUE BRIDGEVILLE (1)		0	0	0	0
CHEMICAL TOTALS		**8,862**	**21,307**	**96,578**	**126,747**
MERCURY	**7439-97-6**				
OCCIDENTAL CHEMICAL		1,074	18	0	1,092
CHEMICAL TOTALS		**1,074**	**18**	**0**	**1,092**
METHANOL	**67-56-1**				
CIBA SPECIALTY CHEMICALS		68,953	0	0	68,953
DAIMLERCHRYSLER		3,800	0	0	3,800
DENTSPLY/CAULK MAIN		350	0	0	350
DENTSPLY/CAULK WEST		59	0	0	59
GENERAL MOTORS		16,400	0	0	16,400
HEWLETT-PACKARD		6,226	0	0	6,226
MACDERMID		909	0	0	909
MEDAL		1,400	0	0	1,400
MOTIVA ENTERPRISES		7,700	29,000	0	36,700
NORAMCO		2,000	0	0	2,000
REICHHOLD		15	0	0	15
ZENECA SPECIALTIES		4,656	0	0	4,656
CHEMICAL TOTALS		**112,468**	**29,000**	**0**	**141,468**
METHYL ETHYL KETONE	**78-93-3**				
D&B INDUSTRIAL GROUP		7,000	0	0	7,000
HERCULES RESEARCH CENTER		83	0	0	83
MACDERMID		27,040	0	0	27,040
RODEL		17,180	0	0	17,180
CHEMICAL TOTALS		**51,303**	**0**	**0**	**51,303**
METHYL ISOBUTYL KETONE	**108-10-1**				
DAIMLERCHRYSLER		41,900	0	0	41,900
GENERAL MOTORS		18,700	0	0	18,700

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APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
NORAMCO		3,200	0	0	3,200
CHEMICAL TOTALS		**63,800**	**0**	**0**	**63,800**
METHYL METHACRYLATE	**80-62-6**				
DENTSPLY/CAULK WEST		35	0	0	35
REICHHOLD		1,916	0	0	1,916
S.C. JOHNSON POLYMER		194	0	0	194
CHEMICAL TOTALS		**2,145**	**0**	**0**	**2,145**
N-METHYL-2-PYRROLIDONE	**872-50-4**				
DAIMLERCHRYSLER		13,500	0	0	13,500
GENERAL MOTORS		31,100	0	0	31,100
MEDAL		600	0	0	600
RODEL TECHNICAL CENTER		1,024	0	0	1,024
WILMINGTON LEATHER COATINGS		30	0	0	30
CHEMICAL TOTALS		**46,254**	**0**	**0**	**46,254**
METHYL TERT-BUTYL ETHER	**1634-04-4**				
ALLEN PETROLEUM (1)		0	0	0	0
CARL KING (1)		0	0	0	0
DAIMLERCHRYSLER		440	0	0	440
GENERAL MOTORS		85	0	0	85
MOTIVA ENTERPRISES		38,000	0	0	38,000
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SICO		900	0	0	900
CHEMICAL TOTALS		**39,425**	**0**	**0**	**39,425**
4,4'-METHYLENEBIS(2-CHLOROANILINE)	**101-14-4**				
PERMA-FLEX		0	0	0	0
RODEL TECHNICAL CENTER		2	0	0	2
CHEMICAL TOTALS		**2**	**0**	**0**	**2**
N-METHYLOLACRYLAMIDE	**924-42-5**				
REICHHOLD		410	0	0	410
CHEMICAL TOTALS		**410**	**0**	**0**	**410**
MOLYBDENUM TRIOXIDE	**1313-27-5**				
MOTIVA ENTERPRISES		15	0	2,830	2,845
CHEMICAL TOTALS		**15**	**0**	**2,830**	**2,845**
NAPHTHALENE	**91-20-3**				
MOTIVA ENTERPRISES		2,585	0	0	2,585
SICO		50	0	0	50
UNIQEMA		2	0	0	2
CHEMICAL TOTALS		**2,637**	**0**	**0**	**2,637**
NICKEL	**7440-02-0**				
ALLOY SURFACES		232	0	0	232
CAMDEL METALS		0	0	0	0
SPI POLYOLS		678	0	10	688
CHEMICAL TOTALS		**910**	**0**	**10**	**920**
NICKEL COMPOUNDS	**N495**				
CITISTEEL USA		28	0	24	52
DAIMLERCHRYSLER		0	0	0	0
DELMARVA POWER EDGE MOOR		18,132	1	899	19,032
DELMARVA POWER INDIAN RIVER		875	418	38,367	39,660
MOTIVA ENTERPRISES		2,400	7,200	250,000	259,600
CHEMICAL TOTALS		**21,435**	**7,619**	**289,290**	**318,344**
NITRATE COMPOUNDS	**N511**				
DELMARVA POWER EDGE MOOR (1)		0	0	0	0
DUPONT SEAFORD		0	669,000	0	669,000
MOTIVA ENTERPRISES		0	670	0	670
PLAYTEX APPAREL		0	0	0	0

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APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
CHEMICAL TOTALS		**0**	**669,670**	**0**	**669,670**
NITRIC ACID	**7697-37-2**				
BARCROFT (1)		0	0	0	0
DAIMLERCHRYSLER		150	0	0	150
PLAYTEX PRODUCTS		37	0	0	37
SPI POLYOLS		10	0	0	10
CHEMICAL TOTALS		**197**	**0**	**0**	**197**
NITROBENZENE	**98-95-3**				
ORIENT		234	0	0	234
CHEMICAL TOTALS		**234**	**0**	**0**	**234**
OZONE	**10028-15-6**				
PRINTPACK		252	0	0	252
CHEMICAL TOTALS		**252**	**0**	**0**	**252**
PHENOL	**108-95-2**				
AMETEK-HAVEG DIVISION		5	0	0	5
MOTIVA ENTERPRISES		0	130	0	130
UNIQEMA		66	0	0	66
CHEMICAL TOTALS		**71**	**130**	**0**	**201**
PHOSGENE	**75-44-5**				
DUPONT EDGE MOOR		800	0	0	800
CHEMICAL TOTALS		**800**	**0**	**0**	**800**
PHOSPHORIC ACID	**7664-38-2**				
CITISTEEL USA (1)		0	0	0	0
DAIMLERCHRYSLER		390	0	0	390
DUPONT SEAFORD		0	0	0	0
HIRSH INDUSTRIES		0	0	0	0
KRAFT FOODS		8,467	0	0	8,467
MOTIVA ENTERPRISES		0	0	0	0
PEPSI-COLA BOTTLING (1)		0	0	0	0
PERDUE GEORGETOWN		0	0	0	0
SPI POLYOLS (1)		0	0	0	0
TOWNSENDS (1)		0	0	0	0
UNIQEMA (1)		0	0	0	0
CHEMICAL TOTALS		**8,857**	**0**	**0**	**8,857**
PHOSPHORUS (YELLOW OR WHITE)	**7723-14-0**				
TOWNSENDS		3,252	0	0	3,252
CHEMICAL TOTALS		**3,252**	**0**	**0**	**3,252**
PHTHALIC ANHYDRIDE	**85-44-9**				
RODEL (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
POLYCYCLIC AROMATIC COMPOUNDS	**N590**				
GAC SEAFORD (1)		0	0	0	0
MOTIVA ENTERPRISES		13	33	9	55
CHEMICAL TOTALS		**13**	**33**	**9**	**55**
PROPYLENE	**115-07-1**				
MOTIVA ENTERPRISES		5,400	0	0	5,400
CHEMICAL TOTALS		**5,400**	**0**	**0**	**5,400**
PROPYLENE OXIDE	**75-56-9**				
UNIQEMA		1,103	0	0	1,103
CHEMICAL TOTALS		**1,103**	**0**	**0**	**1,103**
SODIUM NITRITE	**7632-00-0**				
DAIMLERCHRYSLER		0	0	0	0
GENERAL MOTORS		0	0	0	0
MOTIVA ENTERPRISES		0	15,000	0	15,000

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APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
OCCIDENTAL CHEMICAL		0	0	0	0
CHEMICAL TOTALS		**0**	**15,000**	**0**	**15,000**
STYRENE	**100-42-5**				
MARBLE WORKS		1,967	0	0	1,967
MFG JUSTIN TANKS		18,500	0	0	18,500
MOTIVA ENTERPRISES		22	0	0	22
REICHHOLD		6,020	0	0	6,020
S.C. JOHNSON POLYMER		234	0	0	234
SPATZ FIBERGLASS		4,799	0	0	4,799
CHEMICAL TOTALS		**31,542**	**0**	**0**	**31,542**
SULFURIC ACID (AEROSOL)	**7664-93-9**				
DELMARVA POWER EDGE MOOR		203,050	0	0	203,050
DELMARVA POWER INDIAN RIVER		199,167	0	0	199,167
DUPONT SEAFORD		111,000	0	0	111,000
FIRST STATE POWER MANAGEMENT		45,863	0	0	45,863
GENERAL CHEMICAL		27,000	0	0	27,000
MOTIVA ENTERPRISES		1,400,000	0	0	1,400,000
NORAMCO		10	0	0	10
CHEMICAL TOTALS		**1,986,090**	**0**	**0**	**1,986,090**
TETRACHLOROETHYLENE	**127-18-4**				
MOTIVA ENTERPRISES (1)		0	0	0	0
RITE-OFF		530	0	0	530
CHEMICAL TOTALS		**530**	**0**	**0**	**530**
TITANIUM TETRACHLORIDE	**7550-45-0**				
DUPONT EDGE MOOR		30	0	0	30
CHEMICAL TOTALS		**30**	**0**	**0**	**30**
TOLUENE	**108-88-3**				
ALLEN PETROLEUM (1)		0	0	0	0
ALLIEDSIGNAL		1,640	0	0	1,640
CARL KING (1)		0	0	0	0
DAIMLERCHRYSLER		6,800	0	0	6,800
DENTSPLY/CAULK MAIN		195	0	0	195
DUPONT EDGE MOOR		1,381	0	0	1,381
GENERAL MOTORS		11,160	0	0	11,160
HERCULES RESEARCH CENTER		204	0	0	204
MOTIVA ENTERPRISES		6,400	77	0	6,477
NANTICOKE HOMES		10,940	0	0	10,940
NORAMCO		800	0	0	800
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SERVICE ENERGY-MILFORD (1)		0	0	0	0
SICO		1,100	0	0	1,100
ZENECA SPECIALTIES		19	0	0	19
CHEMICAL TOTALS		**40,639**	**77**	**0**	**40,716**
TOLUENEDIISOCYANATE (MIXED ISOMERS)	**26471-62-5**				
E-A-R SPECIALTY COMPOSITES		20	0	0	20
MACDERMID		20	0	0	20
CHEMICAL TOTALS		**40**	**0**	**0**	**40**
1,2,4-TRICHLOROBENZENE	**120-82-1**				
METACHEM PRODUCTS		10,270	15	0	10,285
CHEMICAL TOTALS		**10,270**	**15**	**0**	**10,285**
1,1,1-TRICHLOROETHANE	**71-55-6**				
ALLOY SURFACES		229	0	0	229
CHEMICAL TOTALS		**229**	**0**	**0**	**229**
TRICHLOROETHYLENE	**79-01-6**				
CAMDEL METALS		5,730	0	0	5,730

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APPENDIX C

1998 DELAWARE TRI ON-SITE RELEASES BY CHEMICAL

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
RITE-OFF (1)		0	0	0	0
CHEMICAL TOTALS		**5,730**	**0**	**0**	**5,730**
TRICHLOROFLUOROMETHANE	**75-69-4**				
DELMARVA POWER EDGE MOOR		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
1,2,4-TRIMETHYLBENZENE	**95-63-6**				
ALLEN PETROLEUM (1)		0	0	0	0
CARL KING (1)		0	0	0	0
DAIMLERCHRYSLER		65,400	0	0	65,400
GENERAL MOTORS		9,402	0	0	9,402
MOTIVA ENTERPRISES		1,860	410	0	2,270
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SERVICE ENERGY-MILFORD (1)		0	0	0	0
SICO (1)		0	0	0	0
CHEMICAL TOTALS		**76,662**	**410**	**0**	**77,072**
VINYL ACETATE	**108-05-4**				
FORMOSA PLASTICS		9,852	0	0	9,852
REICHHOLD		2,249	0	0	2,249
CHEMICAL TOTALS		**12,101**	**0**	**0**	**12,101**
VINYL CHLORIDE	**75-01-4**				
FORMOSA PLASTICS		115,153	0	0	115,153
KANEKA		21,819	1	0	21,820
CHEMICAL TOTALS		**136,972**	**1**	**0**	**136,973**
XYLENE (MIXED ISOMERS)	**1330-20-7**				
ALLEN PETROLEUM (1)		0	0	0	0
ARLON		3,800	0	0	3,800
CARL KING (1)		0	0	0	0
CIBA SPECIALTY CHEMICALS		282	0	0	282
DAIMLERCHRYSLER		57,100	0	0	57,100
GENERAL MOTORS		221,000	0	0	221,000
MOTIVA ENTERPRISES		8,300	84	0	8,384
NANTICOKE HOMES		10,320	0	0	10,320
PENINSULA OIL-BLADES (1)		0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0
SICO		50	0	0	50
CHEMICAL TOTALS		**300,852**	**84**	**0**	**300,936**
ZINC (FUME OR DUST)	**7440-66-6**				
TOWNSENDS (1)		0	0	0	0
CHEMICAL TOTALS		**0**	**0**	**0**	**0**
ZINC COMPOUNDS	**N982**				
ALLEN PETROLEUM (1)		0	0	0	0
ALLEN'S MILLING (1)		0	0	0	0
CITISTEEL USA		3,728	3	134	3,865
DAIMLERCHRYSLER		2	0	0	2
DELMARVA POWER EDGE MOOR		2,828	12,333	2,802	17,963
DELMARVA POWER INDIAN RIVER		2,668	7,585	86,001	96,254
GENERAL MOTORS		12	0	0	12
INSTEEL WIRE PRODUCTS		0	112	0	112
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0
NVF YORKLYN		0	18,250	0	18,250
PERDUE BRIDGEVILLE (1)		0	0	0	0
PPG ARCHITECTURAL FINISHES		72	0	0	72
CHEMICAL TOTALS		**9,310**	**38,283**	**88,937**	**136,530**
STATEWIDE TOTALS		**11,103,094**	**806,954**	**937,538**	**12,847,586**

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
ACRYLIC ACID											
REICHHOLD		0	0	0	0	0	0	1	0	0	1
CHEMICAL TOTALS	**79-10-7**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
ACRYLONITRILE											
REICHHOLD		35	228	0	507	0	770	778,725	0	0	778,725
CHEMICAL TOTALS	**107-13-1**	**35**	**228**	**0**	**507**	**0**	**770**	**778,725**	**0**	**0**	**778,725**
AMMONIA											
AGRILINK FOODS		0	0	0	0	0	0	0	0	0	0
AIR LIQUIDE AMERICA		0	0	0	0	0	0	0	0	0	0
ALLIEDSIGNAL		0	0	2,725	0	0	2,725	0	0	0	0
DELMARVA POWER EDGE MOOR		0	0	300	0	0	300	0	0	0	0
FORMOSA PLASTICS		0	0	0	0	0	0	0	0	0	0
GENERAL CHEMICAL		0	6,100	0	0	0	6,100	55,000	0	0	55,000
HANOVER FOODS		0	0	0	0	0	0	0	0	0	0
KRAFT FOODS		0	850	0	0	0	850	61,000	0	0	61,000
MOTIVA ENTERPRISES		0	0	64	0	0	64	22,000	14,000,000	0	14,022,000
PERDUE GEORGETOWN		0	0	0	0	0	0	36,000	0	0	36,000
PERDUE MILFORD		0	260	0	0	0	260	0	0	0	0
REICHHOLD		0	10	0	0	0	10	295	0	0	295
S.C. JOHNSON POLYMER		0	597	35	0	0	632	0	0	0	0
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7664-41-7**	**0**	**7,817**	**3,124**	**0**	**0**	**10,941**	**174,295**	**14,000,000**	**0**	**14,174,295**
ANILINE											
CIBA SPECIALTY CHEMICALS		0	59,170	14,220	220	0	73,610	0	0	0	0
ORIENT		0	770	0	0	0	770	11,081	0	0	11,081
CHEMICAL TOTALS	**62-53-3**	**0**	**59,940**	**14,220**	**220**	**0**	**74,380**	**11,081**	**0**	**0**	**11,081**
ANTIMONY COMPOUNDS											
BRANDYWINE COMPOUNDING		593	0	0	0	0	593	0	0	0	0
JOHNSON CONTROLS		0	0	0	0	25,536	25,536	0	0	0	0
CHEMICAL TOTALS	**N010**	**593**	**0**	**0**	**0**	**25,536**	**26,129**	**0**	**0**	**0**	**0**
ARSENIC COMPOUNDS											
DELMARVA POWER INDIAN RIVER		941	0	0	0	0	941	0	0	0	0
CHEMICAL TOTALS	**N020**	**941**	**0**	**0**	**0**	**0**	**941**	**0**	**0**	**0**	**0**
ATRAZINE											
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**1912-24-9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
BARIUM											
AMERICAN MINERALS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7440-39-3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
BARIUM COMPOUNDS											
DAIMLERCHRYSLER (1)		0	0	0	0	0	0	0	0	0	0
DELMARVA POWER EDGE MOOR		111,635	0	0	0	0	111,635	0	0	0	0
DELMARVA POWER INDIAN RIVER		7,173	0	0	0	0	7,173	0	0	0	0
DUPONT SEAFORD		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**N040**	**118,808**	**0**	**0**	**0**	**0**	**118,808**	**0**	**0**	**0**	**0**
BENZENE											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	0	0	0	0	550	0	0	550
METACHEM PRODUCTS		0	0	269	0	0	269	0	0	207,800	207,800
MOTIVA ENTERPRISES		2	0	1	35	0	38	89,000	0	0	89,000
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SICO (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**71-43-2**	**2**	**0**	**270**	**35**	**0**	**307**	**89,550**	**0**	**207,800**	**297,350**
BIPHENYL											
CIBA SPECIALTY CHEMICALS		0	162,140	48,860	44,260	15,760	271,020	2,290	0	0	2,290
DUPONT SEAFORD		0	0	21,000	0	0	21,000	0	0	0	0
CHEMICAL TOTALS	**92-52-4**	**0**	**162,140**	**69,860**	**44,260**	**15,760**	**292,020**	**2,290**	**0**	**0**	**2,290**
BIS(2-CHLOROETHYL) ETHER											
UNIQEMA		0	8,965	0	0	1,578	10,543	0	0	0	0
CHEMICAL TOTALS	**111-44-4**	**0**	**8,965**	**0**	**0**	**1,578**	**10,543**	**0**	**0**	**0**	**0**
BORON TRIFLUORIDE											
ALLIEDSIGNAL		0	0	5	35	0	40	0	0	0	0
CHEMICAL TOTALS	**7637-07-2**	**0**	**0**	**5**	**35**	**0**	**40**	**0**	**0**	**0**	**0**
1,3-BUTADIENE											
MOTIVA ENTERPRISES		0	0	0	0	0	0	0	0	0	0
REICHHOLD		0	0	0	0	0	0	1,402,243	0	0	1,402,243
CHEMICAL TOTALS	**106-99-0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,402,243**	**0**	**0**	**1,402,243**
BUTYL ACRYLATE											
REICHHOLD		0	2	0	620	0	622	78	0	0	78
S.C. JOHNSON POLYMER (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**141-32-2**	**0**	**2**	**0**	**620**	**0**	**622**	**78**	**0**	**0**	**78**
N-BUTYL ALCOHOL											
DAIMLERCHRYSLER		3	0	0	0	4,573	4,576	8,300	0	0	8,300
GENERAL MOTORS		0	0	1,032	0	0	1,032	8,000	0	0	8,000
HIRSH INDUSTRIES		0	0	0	0	0	0	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	17,000	0	0	17,000

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
CHEMICAL TOTALS	**71-36-3**	**3**	**0**	**1,032**	**0**	**4,573**	**5,608**	**33,300**	**0**	**0**	**33,300**
TERT-BUTYL ALCOHOL											
MOTIVA ENTERPRISES (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**75-65-0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CARBONYL SULFIDE											
DUPONT EDGE MOOR		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**463-58-1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CHLORINE											
BARCROFT (1)		0	0	0	0	0	0	0	0	0	0
CHLORAMONE		0	0	0	0	0	0	0	0	0	0
DUPONT EDGE MOOR		0	0	0	0	0	0	4,100,000	0	0	4,100,000
METACHEM PRODUCTS		0	0	0	0	0	0	0	0	0	0
OCCIDENTAL CHEMICAL		0	0	95	0	0	95	3,412,800	0	0	3,412,800
PLAYTEX PRODUCTS		0	430	0	0	0	430	2,500	0	0	2,500
CHEMICAL TOTALS	**7782-50-5**	**0**	**430**	**95**	**0**	**0**	**525**	**7,515,300**	**0**	**0**	**7,515,300**
CHLOROALLYL METHENAMINE CHLORIDE (2)											
PPG ARCHITECTURAL FINISHES (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**4080-31-3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
P-CHLOROANILINE											
CIBA SPECIALTY CHEMICALS		0	2,684	3,540	520	0	6,744	0	0	0	0
CHEMICAL TOTALS	**106-47-8**	**0**	**2,684**	**3,540**	**520**	**0**	**6,744**	**0**	**0**	**0**	**0**
CHLOROBENZENE											
METACHEM PRODUCTS		0	0	2,423	0	0	2,423	0	0	97,014	97,014
CHEMICAL TOTALS	**108-90-7**	**0**	**0**	**2,423**	**0**	**0**	**2,423**	**0**	**0**	**97,014**	**97,014**
CHLORODIFLUOROMETHANE											
FLAIR-NEW CASTLE		0	0	0	0	189	189	0	0	0	0
CHEMICAL TOTALS	**75-45-6**	**0**	**0**	**0**	**0**	**189**	**189**	**0**	**0**	**0**	**0**
CHLOROETHANE											
ALLIEDSIGNAL (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**75-00-3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CHLOROFORM											
OCCIDENTAL CHEMICAL		0	0	9,430	0	0	9,430	0	0	0	0
CHEMICAL TOTALS	**67-66-3**	**0**	**0**	**9,430**	**0**	**0**	**9,430**	**0**	**0**	**0**	**0**
CHLOROMETHANE											
ZENECA SPECIALTIES		0	203	0	0	0	203	0	0	0	0
CHEMICAL TOTALS	**74-87-3**	**0**	**203**	**0**	**0**	**0**	**203**	**0**	**0**	**0**	**0**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
CHROMIUM											
CAMDEL METALS		83	0	0	0	0	83	0	0	0	0
CHEMICAL TOTALS	**7440-47-3**	**83**	**0**	**0**	**0**	**0**	**83**	**0**	**0**	**0**	**0**
CHROMIUM COMPOUNDS											
AMERICAN MINERALS		0	0	0	0	0	0	0	0	0	0
CHROME DEPOSIT		960	0	0	0	1,400	2,360	0	0	3,000	3,000
CITISTEEL USA		723	0	0	0	26,888	27,611	0	0	0	0
DELMARVA POWER EDGE MOOR		17,661	4	0	0	0	17,665	0	0	0	0
DELMARVA POWER INDIAN RIVER		2,476	0	0	0	0	2,476	0	0	0	0
DUPONT HOLLY RUN		6,200	423	0	0	0	6,623	0	0	0	0
ORIENT		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**N090**	**28,020**	**427**	**0**	**0**	**28,288**	**56,735**	**0**	**0**	**3,000**	**3,000**
COPPER											
FLAIR-NEW CASTLE		0	0	0	0	11,120	11,120	0	0	0	0
GENERAL MOTORS		0	0	0	0	5,400	5,400	0	0	0	0
CHEMICAL TOTALS	**7440-50-8**	**0**	**0**	**0**	**0**	**16,520**	**16,520**	**0**	**0**	**0**	**0**
COPPER COMPOUNDS											
ALLEN'S MILLING (1)		0	0	0	0	0	0	0	0	0	0
BRANDYWINE COMPOUNDING		955	0	0	0	0	955	0	0	0	0
CITISTEEL USA		7,055	0	0	0	31,633	38,688	0	0	0	0
DELMARVA POWER EDGE MOOR		23,517	19	0	0	0	23,536	0	0	0	0
DELMARVA POWER INDIAN RIVER		1,450	0	0	0	0	1,450	0	0	0	0
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE (1)		0	0	0	0	0	0	0	0	0	0
TOWNSENDS (1)		0	0	0	0	0	0	0	0	0	0
ZENECA SPECIALTIES		194	142	0	0	0	336	0	0	0	0
CHEMICAL TOTALS	**N100**	**33,171**	**161**	**0**	**0**	**31,633**	**64,965**	**0**	**0**	**0**	**0**
CRESOL (MIXED ISOMERS)											
MOTIVA ENTERPRISES		0	0	0	0	0	0	11,000	0	0	11,000
CHEMICAL TOTALS	**1319-77-3**	**0**	**0**	**0**	**0**	**0**	**0**	**11,000**	**0**	**0**	**11,000**
CUMENE											
MOTIVA ENTERPRISES		0	0	0	0	0	0	6,400	0	0	6,400
CHEMICAL TOTALS	**98-82-8**	**0**	**0**	**0**	**0**	**0**	**0**	**6,400**	**0**	**0**	**6,400**
CYCLOHEXANE											
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
CIBA SPECIALTY CHEMICALS		0	3,686	5,500	500	0	9,686	1,051	0	0	1,051
MOTIVA ENTERPRISES		0	0	17	0	0	17	49,000	0	0	49,000
SICO (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**110-82-7**	**0**	**3,686**	**5,517**	**500**	**0**	**9,703**	**50,051**	**0**	**0**	**50,051**
DECABROMODIPHENYL OXIDE											

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
BRANDYWINE COMPOUNDING		2,122	0	0	0	0	2,122	0	0	0	0
CHEMICAL TOTALS	**1163-19-5**	**2,122**	**0**	**0**	**0**	**0**	**2,122**	**0**	**0**	**0**	**0**
1,3-DICHLOROBENZENE											
METACHEM PRODUCTS		0	0	0	0	0	0	0	0	1,750	1,750
NORAMCO		0	1,000	0	0	0	1,000	0	0	0	0
CHEMICAL TOTALS	**541-73-1**	**0**	**1,000**	**0**	**0**	**0**	**1,000**	**0**	**0**	**1,750**	**1,750**
1,2-DICHLOROBENZENE											
METACHEM PRODUCTS		0	0	2,423	0	0	2,423	0	0	36,376	36,376
CHEMICAL TOTALS	**95-50-1**	**0**	**0**	**2,423**	**0**	**0**	**2,423**	**0**	**0**	**36,376**	**36,376**
1,4-DICHLOROBENZENE											
METACHEM PRODUCTS		0	0	2,319	0	0	2,319	0	0	28,221	28,221
CHEMICAL TOTALS	**106-46-7**	**0**	**0**	**2,319**	**0**	**0**	**2,319**	**0**	**0**	**28,221**	**28,221**
1,1-DICHLORO-1-FLUOROETHANE											
RITE-OFF		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**1717-00-6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DICHLOROMETHANE											
NORAMCO		0	111,000	0	50,000	0	161,000	0	0	0	0
RITE-OFF		0	0	11,400	0	0	11,400	0	0	0	0
CHEMICAL TOTALS	**75-09-2**	**0**	**111,000**	**11,400**	**50,000**	**0**	**172,400**	**0**	**0**	**0**	**0**
1,2-DICHLOROPROPANE											
MOTIVA ENTERPRISES (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**78-87-5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1,3-DICHLOROPROPYLENE											
ALLIEDSIGNAL		0	0	166	16,645	0	16,811	0	0	0	0
CHEMICAL TOTALS	**542-75-6**	**0**	**0**	**166**	**16,645**	**0**	**16,811**	**0**	**0**	**0**	**0**
DIETHANOLAMINE											
MOTIVA ENTERPRISES		0	0	4	0	0	4	87,000	0	0	87,000
CHEMICAL TOTALS	**111-42-2**	**0**	**0**	**4**	**0**	**0**	**4**	**87,000**	**0**	**0**	**87,000**
DI(2-ETHYLHEXYL) PHTHALATE											
ROLLER SERVICE (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**117-81-7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
DIISOCYANATES											
DAIMLERCHRYSLER		0	0	2,900	0	0	2,900	0	0	0	0
E-A-R SPECIALTY COMPOSITES		0	0	1,796	0	0	1,796	0	0	0	0
NANTICOKE HOMES		0	0	0	0	0	0	0	0	0	0
RODEL		0	0	546	0	0	546	0	0	0	0
WILMINGTON LEATHER COATINGS (1)		0	0	0	0	0	0	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.
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Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
CHEMICAL TOTALS	**N120**	**0**	**0**	**5,242**	**0**	**0**	**5,242**	**0**	**0**	**0**	**0**
DIMETHOATE											
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**60-51-5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
N,N-DIMETHYLFORMAMIDE											
RODEL		0	373,596	206,959	339,520	0	920,075	3,596	0	5,487,439	5,491,035
CHEMICAL TOTALS	**68-12-2**	**0**	**373,596**	**206,959**	**339,520**	**0**	**920,075**	**3,596**	**0**	**5,487,439**	**5,491,035**
ETHYL ACRYLATE											
REICHHOLD		0	1	0	0	0	1	45	0	0	45
S.C. JOHNSON POLYMER (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**140-88-5**	**0**	**1**	**0**	**0**	**0**	**1**	**45**	**0**	**0**	**45**
ETHYLBENZENE											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	0	0	65,000	65,000	440	0	0	440
GENERAL MOTORS		0	0	39	0	0	39	0	0	0	0
MOTIVA ENTERPRISES		12	0	0	46	0	58	180,000	0	0	180,000
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SICO(1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**100-41-4**	**12**	**0**	**39**	**46**	**65,000**	**65,097**	**180,440**	**0**	**0**	**180,440**
ETHYLENE											
MOTIVA ENTERPRISES		0	0	0	0	0	0	900	0	0	900
SUNOCO MARCUS HOOK REFINERY		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**74-85-1**	**0**	**0**	**0**	**0**	**0**	**0**	**900**	**0**	**0**	**900**
ETHYLENE GLYCOL											
DAIMLERCHRYSLER		0	500	0	0	0	500	0	0	0	0
DELMARVA POWER EDGE MOOR (1)		0	0	0	0	0	0	0	0	0	0
GENERAL MOTORS		0	940	0	0	0	940	0	0	0	0
NANTICOKE HOMES		0	0	0	0	0	0	0	0	0	0
NORAMCO		0	0	0	0	8,000	8,000	0	0	0	0
PPG ARCHITECTURAL FINISHES		348	1,163	0	0	0	1,511	1	0	0	1
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
ZENECA SPECIALTIES		0	28,204	0	0	0	28,204	0	0	0	0
CHEMICAL TOTALS	**107-21-1**	**348**	**30,807**	**0**	**0**	**8,000**	**39,155**	**1**	**0**	**0**	**1**
ETHYLENE OXIDE											
SUNOCO MARCUS HOOK REFINERY		0	0	0	0	0	0	0	0	0	0
UNIQEMA		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**75-21-8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
FORMALDEHYDE											
AMETEK-HAVEG DIVISION (1)		0	0	0	0	0	0	0	0	0	0
REICHHOLD		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**50-00-0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
FORMIC ACID											
ZENECA SPECIALTIES		75,234	131	0	0	0	75,365	0	0	0	0
CHEMICAL TOTALS	**64-18-6**	**75,234**	**131**	**0**	**0**	**0**	**75,365**	**0**	**0**	**0**	**0**
GLYCOL ETHERS											
DAIMLERCHRYSLER		672	240,000	5,130	360	34	246,196	33,000	0	0	33,000
GENERAL MOTORS		0	50,000	0	0	0	50,000	41,000	0	0	41,000
HIRSH INDUSTRIES		0	0	0	0	0	0	0	0	0	0
PPG ARCHITECTURAL FINISHES (1)		0	0	0	0	0	0	0	0	0	0
RITE-OFF (1)		0	0	0	0	0	0	0	0	0	0
S.C. JOHNSON POLYMER (1)		0	0	0	0	0	0	0	0	0	0
UNIQEMA		0	6,427	0	0	0	6,427	2,755	0	0	2,755
ZENECA SPECIALTIES		0	815	0	272	0	1,087	0	0	0	0
CHEMICAL TOTALS	**N230**	**672**	**297,242**	**5,130**	**632**	**34**	**303,710**	**76,755**	**0**	**0**	**76,755**
N-HEXANE											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
ALLIEDSIGNAL		0	0	8,510	84,660	0	93,170	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
MEDAL		0	0	15,500	0	0	15,500	0	0	1,350,000	1,350,000
MOTIVA ENTERPRISES		0	0	0	0	0	0	93,000	0	0	93,000
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
RITE-OFF		0	0	0	300	0	300	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SICO (1)		0	0	0	0	0	0	0	0	0	0
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**110-54-3**	**0**	**0**	**24,010**	**84,960**	**0**	**108,970**	**93,000**	**0**	**1,350,000**	**1,443,000**
HYDROCHLORIC ACID (AEROSOL)											
DELMARVA POWER EDGE MOOR		0	0	0	0	0	0	0	0	0	0
DELMARVA POWER INDIAN RIVER		0	0	0	0	0	0	0	0	0	0
DUPONT EDGE MOOR		0	0	0	0	0	0	25,000,000	0	0	25,000,000
DUPONT SEAFORD		0	0	0	0	0	0	0	0	0	0
FIRST STATE POWER MANAGEMENT		0	0	0	0	0	0	0	0	0	0
KANEKA		0	0	0	0	0	0	135,828	0	0	135,828
METACHEM PRODUCTS		0	0	0	0	0	0	3,965,376	0	0	3,965,376
MOTIVA ENTERPRISES		0	0	0	0	0	0	930	0	0	930
NORAMCO		0	0	0	0	0	0	100,000	0	0	100,000
CHEMICAL TOTALS	**7647-01-0**	**0**	**0**	**0**	**0**	**0**	**0**	**29,202,134**	**0**	**0**	**29,202,134**
HYDROGEN FLUORIDE											

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(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
DELMARVA POWER EDGE MOOR		0	0	0	0	0	0	74,314	0	0	74,314
DELMARVA POWER INDIAN RIVER		0	0	0	0	0	0	158,306	0	0	158,306
FIRST STATE POWER MANAGEMENT		0	0	0	0	0	0	0	0	0	0
GENERAL CHEMICAL		0	0	0	0	0	0	7,800	0	0	7,800
CHEMICAL TOTALS	**7664-39-3**	**0**	**0**	**0**	**0**	**0**	**0**	**240,420**	**0**	**0**	**240,420**
4,4'-ISOPROPYLIDENEDIPHENOL											
UNIQEMA		0	1,934	0	0	0	1,934	0	0	0	0
CHEMICAL TOTALS	**80-05-7**	**0**	**1,934**	**0**	**0**	**0**	**1,934**	**0**	**0**	**0**	**0**
LEAD											
AMERICAN MINERALS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7439-92-1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LEAD COMPOUNDS											
CITISTEEL USA		76	0	0	0	285,682	285,758	0	0	0	0
DELMARVA POWER INDIAN RIVER		1,043	0	0	0	0	1,043	0	0	0	0
GENERAL CHEMICAL		1,117	364	0	0	0	1,481	0	0	0	0
JOHNSON CONTROLS		10	13	19	0	6,376,098	6,376,140	0	0	0	0
CHEMICAL TOTALS	**N420**	**2,246**	**377**	**19**	**0**	**6,661,780**	**6,664,422**	**0**	**0**	**0**	**0**
MANGANESE											
TOWNSENDS (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7439-96-5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MANGANESE COMPOUNDS											
ALLEN'S MILLING (1)		0	0	0	0	0	0	0	0	0	0
AMERICAN MINERALS		0	0	0	0	0	0	0	0	0	0
CITISTEEL USA		5,740	0	0	0	193,750	199,490	0	0	0	0
DAIMLERCHRYSLER		5,370	280	0	0	760	6,410	0	0	0	0
DELMARVA POWER EDGE MOOR		28,749	0	0	0	0	28,749	0	0	0	0
DELMARVA POWER INDIAN RIVER		5,858	0	0	0	0	5,858	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**N450**	**45,717**	**280**	**0**	**0**	**194,510**	**240,507**	**0**	**0**	**0**	**0**
MERCURY											
OCCIDENTAL CHEMICAL		676	0	0	0	0	676	0	0	19,970	19,970
CHEMICAL TOTALS	**7439-97-6**	**676**	**0**	**0**	**0**	**0**	**676**	**0**	**0**	**19,970**	**19,970**
METHANOL											
CIBA SPECIALTY CHEMICALS		0	1,951,863	100,160	22,100	1,725,100	3,799,223	258,955	0	3,894	262,849
DAIMLERCHRYSLER		0	0	150	0	0	150	0	0	0	0
DENTSPLY/CAULK MAIN		0	0	0	7,005	0	7,005	0	0	0	0
DENTSPLY/CAULK WEST		0	0	0	11,743	0	11,743	0	0	0	0
GENERAL MOTORS		0	0	322	0	21,000	21,322	4,800	0	0	4,800

(1) Submitted Form A for this chemical, which does not include waste amounts.
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Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
HEWLETT-PACKARD		0	0	0	9,179	0	9,179	0	0	0	0
MACDERMID		0	0	502	11,186	0	11,688	0	11,017	0	11,017
MEDAL		0	0	35,872	0	0	35,872	0	0	1,500,000	1,500,000
MOTIVA ENTERPRISES		0	0	4	0	0	4	17,000,000	0	0	17,000,000
NORAMCO		0	8,000	0	164,000	0	172,000	0	0	0	0
REICHHOLD		0	10	0	0	0	10	296	0	0	296
ZENECA SPECIALTIES		0	53,995	0	105,197	0	159,192	0	0	0	0
CHEMICAL TOTALS	**67-56-1**	**0**	**2,013,868**	**137,010**	**330,410**	**1,746,100**	**4,227,388**	**17,264,051**	**11,017**	**1,503,894**	**18,778,962**
METHYL ETHYL KETONE											
D&B INDUSTRIAL GROUP		0	0	0	7,000	0	7,000	0	0	0	0
HERCULES RESEARCH CENTER		0	0	620	33,400	0	34,020	0	0	0	0
MACDERMID		0	1,180	5,231	69,059	0	75,470	0	2,004,637	10,446	2,015,083
RODEL		0	0	88	1,938	0	2,026	515,623	0	0	515,623
CHEMICAL TOTALS	**78-93-3**	**0**	**1,180**	**5,939**	**111,397**	**0**	**118,516**	**515,623**	**2,004,637**	**10,446**	**2,530,706**
METHYL ISOBUTYL KETONE											
DAIMLERCHRYSLER		0	0	110	240	170,000	170,350	0	0	0	0
GENERAL MOTORS		0	0	0	0	0	0	14,000	0	0	14,000
NORAMCO		0	45,000	0	232,700	0	277,700	0	0	1,265,000	1,265,000
CHEMICAL TOTALS	**108-10-1**	**0**	**45,000**	**110**	**232,940**	**170,000**	**448,050**	**14,000**	**0**	**1,265,000**	**1,279,000**
METHYL METHACRYLATE											
DENTSPLY/CAULK WEST		0	0	0	3,450	0	3,450	0	0	0	0
REICHHOLD		0	30	0	1,939	0	1,969	317	0	0	317
S.C. JOHNSON POLYMER		0	1	35	0	0	36	934	0	161	1,095
CHEMICAL TOTALS	**80-62-6**	**0**	**31**	**35**	**5,389**	**0**	**5,455**	**1,251**	**0**	**161**	**1,412**
N-METHYL-2-PYRROLIDONE											
DAIMLERCHRYSLER		0	0	0	0	15	15	1,700	0	0	1,700
GENERAL MOTORS		0	0	0	0	0	0	1,300	0	0	1,300
MEDAL		0	55,800	4,000	0	5,600	65,400	0	0	0	0
RODEL TECHNICAL CENTER		0	0	0	15,483	0	15,483	0	0	0	0
WILMINGTON LEATHER COATINGS		0	0	283	6,566	0	6,849	0	0	0	0
CHEMICAL TOTALS	**872-50-4**	**0**	**55,800**	**4,283**	**22,049**	**5,615**	**87,747**	**3,000**	**0**	**0**	**3,000**
METHYL TERT-BUTYL ETHER											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	0	0	0	0	1,700	0	0	1,700
GENERAL MOTORS		0	0	570	0	0	570	0	0	0	0
MOTIVA ENTERPRISES		52	0	22	0	0	74	710,000	0	0	710,000
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SICO		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**1634-04-4**	**52**	**0**	**592**	**0**	**0**	**644**	**711,700**	**0**	**0**	**711,700**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
4,4'-METHYLENEBIS(2-CHLOROANILINE)											
PERMA-FLEX		0	0	0	0	0	0	0	0	0	0
RODEL TECHNICAL CENTER		0	0	2,903	0	0	2,903	0	0	0	0
CHEMICAL TOTALS	**101-14-4**	**0**	**0**	**2,903**	**0**	**0**	**2,903**	**0**	**0**	**0**	**0**
N-METHYLOLACRYLAMIDE											
REICHHOLD		0	0	0	0	0	0	10	0	0	10
CHEMICAL TOTALS	**924-42-5**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**10**
MOLYBDENUM TRIOXIDE											
MOTIVA ENTERPRISES		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**1313-27-5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NAPHTHALENE											
MOTIVA ENTERPRISES		371	0	0	8	0	379	12,000	0	0	12,000
SICO		0	0	0	0	105	105	0	0	0	0
UNIQEMA		0	701	0	0	0	701	300	0	0	300
CHEMICAL TOTALS	**91-20-3**	**371**	**701**	**0**	**8**	**105**	**1,185**	**12,300**	**0**	**0**	**12,300**
NICKEL											
ALLOY SURFACES		232	0	0	0	0	232	0	0	0	0
CAMDEL METALS		2	0	0	0	0	2	0	0	0	0
SPI POLYOLS		22,839	0	0	0	57,979	80,818	0	0	42,000	42,000
CHEMICAL TOTALS	**7440-02-0**	**23,073**	**0**	**0**	**0**	**57,979**	**81,052**	**0**	**0**	**42,000**	**42,000**
NICKEL COMPOUNDS											
CITISTEEL USA		1,716	0	0	0	3,064	4,780	0	0	0	0
DAIMLERCHRYSLER		3,080	740	0	0	2,000	5,820	0	0	0	0
DELMARVA POWER EDGE MOOR		20,438	10	0	0	0	20,448	0	0	0	0
DELMARVA POWER INDIAN RIVER		1,198	0	0	0	0	1,198	0	0	0	0
MOTIVA ENTERPRISES		51	0	0	0	853	904	0	0	0	0
CHEMICAL TOTALS	**N495**	**26,483**	**750**	**0**	**0**	**5,917**	**33,150**	**0**	**0**	**0**	**0**
NITRATE COMPOUNDS											
DELMARVA POWER EDGE MOOR (1)		0	0	0	0	0	0	0	0	0	0
DUPONT SEAFORD		0	0	13	0	0	13	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	1,100,000	0	0	1,100,000
PLAYTEX APPAREL		0	48,000	0	0	0	48,000	0	0	0	0
CHEMICAL TOTALS	**N511**	**0**	**48,000**	**13**	**0**	**0**	**48,013**	**1,100,000**	**0**	**0**	**1,100,000**
NITRIC ACID											
BARCROFT (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	0	0	0	0	1,400	0	0	1,400
PLAYTEX PRODUCTS		0	0	23,600	0	0	23,600	9,500	0	0	9,500
SPI POLYOLS		0	0	1,000	0	0	1,000	0	0	0	0
CHEMICAL TOTALS	**7697-37-2**	**0**	**0**	**24,600**	**0**	**0**	**24,600**	**10,900**	**0**	**0**	**10,900**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
NITROBENZENE											
ORIENT		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**98-95-3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OZONE											
PRINTPACK		0	0	0	0	0	0	25,200	0	0	25,200
CHEMICAL TOTALS	**10028-15-6**	**0**	**0**	**0**	**0**	**0**	**0**	**25,200**	**0**	**0**	**25,200**
PHENOL											
AMETEK-HAVEG DIVISION		0	5	0	0	0	5	318	0	280	598
MOTIVA ENTERPRISES		0	0	0	0	0	0	23,000	0	0	23,000
UNIQEMA		0	610	0	0	0	610	262	0	0	262
CHEMICAL TOTALS	**108-95-2**	**0**	**615**	**0**	**0**	**0**	**615**	**23,580**	**0**	**280**	**23,860**
PHOSGENE											
DUPONT EDGE MOOR		0	0	0	0	0	0	40,000	0	0	40,000
CHEMICAL TOTALS	**75-44-5**	**0**	**0**	**0**	**0**	**0**	**0**	**40,000**	**0**	**0**	**40,000**
PHOSPHORIC ACID											
CITISTEEL USA (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	0	0	0	0	3,500	0	0	3,500
DUPONT SEAFORD		0	0	0	0	0	0	28,000	0	0	28,000
HIRSH INDUSTRIES		0	5	18,765	0	0	18,770	0	0	0	0
KRAFT FOODS		0	0	0	0	0	0	27,000	0	0	27,000
MOTIVA ENTERPRISES		0	0	0	0	39,000	39,000	280,000	0	0	280,000
PEPSI-COLA BOTTLING (1)		0	0	0	0	0	0	0	0	0	0
PERDUE GEORGETOWN		0	0	0	0	0	0	10,500	0	0	10,500
SPI POLYOLS (1)		0	0	0	0	0	0	0	0	0	0
TOWNSENDS (1)		0	0	0	0	0	0	0	0	0	0
UNIQEMA (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7664-38-2**	**0**	**5**	**18,765**	**0**	**39,000**	**57,770**	**349,000**	**0**	**0**	**349,000**
PHOSPHORUS (YELLOW OR WHITE)											
TOWNSENDS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7723-14-0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PHTHALIC ANHYDRIDE											
RODEL (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**85-44-9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
POLYCYCLIC AROMATIC COMPOUNDS											
GAC SEAFORD (1)		0	0	0	0	0	0	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	1,400	11	0	1,411
CHEMICAL TOTALS	**N590**	**0**	**0**	**0**	**0**	**0**	**0**	**1,400**	**11**	**0**	**1,411**
PROPYLENE											
MOTIVA ENTERPRISES		0	0	0	0	0	0	50,000	0	0	50,000

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
CHEMICAL TOTALS	**115-07-1**	**0**	**0**	**0**	**0**	**0**	**0**	**50,000**	**0**	**0**	**50,000**
PROPYLENE OXIDE											
UNIQEMA		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**75-56-9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SODIUM NITRITE											
DAIMLERCHRYSLER		0	740	0	0	0	740	0	0	0	0
GENERAL MOTORS		0	5,600	0	0	0	5,600	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	1,800,000	0	0	1,800,000
OCCIDENTAL CHEMICAL		0	0	7,032	0	0	7,032	0	0	0	0
CHEMICAL TOTALS	**7632-00-0**	**0**	**6,340**	**7,032**	**0**	**0**	**13,372**	**1,800,000**	**0**	**0**	**1,800,000**
STYRENE											
MARBLE WORKS		0	0	0	0	0	0	0	0	0	0
MFG JUSTIN TANKS		0	0	510	0	0	510	0	0	0	0
MOTIVA ENTERPRISES		0	0	0	0	0	0	150	0	0	150
REICHHOLD		390	1,982	0	898	0	3,270	150,354	0	0	150,354
S.C. JOHNSON POLYMER		0	1	101	0	0	102	296	0	152	448
SPATZ FIBERGLASS		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**100-42-5**	**390**	**1,983**	**611**	**898**	**0**	**3,882**	**150,800**	**0**	**152**	**150,952**
SULFURIC ACID (AEROSOL)											
DELMARVA POWER EDGE MOOR		0	0	0	0	0	0	165,424	0	0	165,424
DELMARVA POWER INDIAN RIVER		0	0	0	0	0	0	528,623	0	0	528,623
DUPONT SEAFORD		0	0	0	0	0	0	0	0	0	0
FIRST STATE POWER MANAGEMENT		0	0	0	0	0	0	0	0	0	0
GENERAL CHEMICAL		0	0	0	0	0	0	1,540,000	0	0	1,540,000
MOTIVA ENTERPRISES		0	0	0	0	0	0	120,000	0	0	120,000
NORAMCO		0	0	0	0	0	0	90	0	0	90
CHEMICAL TOTALS	**7664-93-9**	**0**	**0**	**0**	**0**	**0**	**0**	**2,354,137**	**0**	**0**	**2,354,137**
TETRACHLOROETHYLENE											
MOTIVA ENTERPRISES (1)		0	0	0	0	0	0	0	0	0	0
RITE-OFF		0	0	4,500	0	0	4,500	0	0	0	0
CHEMICAL TOTALS	**127-18-4**	**0**	**0**	**4,500**	**0**	**0**	**4,500**	**0**	**0**	**0**	**0**
TITANIUM TETRACHLORIDE											
DUPONT EDGE MOOR		0	0	0	0	0	0	2,000,000	0	0	2,000,000
CHEMICAL TOTALS	**7550-45-0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,000,000**	**0**	**0**	**2,000,000**
TOLUENE											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
ALLIEDSIGNAL		0	0	2,005	26,700	0	28,705	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		0	0	150	0	3	153	2,000	0	0	2,000
DENTSPLY/CAULK MAIN		0	0	0	3,903	0	3,903	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL
(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
DUPONT EDGE MOOR		0	0	1,200	0	0	1,200	0	0	0	0
GENERAL MOTORS		0	0	243	0	0	243	22	0	0	22
HERCULES RESEARCH CENTER		0	0	13,284	100,600	0	113,884	0	0	0	0
MOTIVA ENTERPRISES		30	0	0	200	0	230	200,000	0	0	200,000
NANTICOKE HOMES		0	0	0	0	0	0	0	0	0	0
NORAMCO		0	86,000	0	84,000	0	170,000	0	0	0	0
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-MILFORD (1)		0	0	0	0	0	0	0	0	0	0
SICO		0	0	0	0	0	0	0	0	0	0
ZENECA SPECIALTIES		0	26	0	17,360	0	17,386	0	0	0	0
CHEMICAL TOTALS	**108-88-3**	**30**	**86,026**	**16,882**	**232,763**	**3**	**335,704**	**202,022**	**0**	**0**	**202,022**
TOLUENEDIISOCYANATE (MIXED ISOMERS)											
E-A-R SPECIALTY COMPOSITES		0	0	2,891	0	0	2,891	0	0	0	0
MACDERMID		0	0	0	0	0	0	1,006	0	0	1,006
CHEMICAL TOTALS	**26471-62-5**	**0**	**0**	**2,891**	**0**	**0**	**2,891**	**1,006**	**0**	**0**	**1,006**
1,2,4-TRICHLOROBENZENE											
METACHEM PRODUCTS		0	0	23,484	0	0	23,484	0	0	2,261	2,261
CHEMICAL TOTALS	**120-82-1**	**0**	**0**	**23,484**	**0**	**0**	**23,484**	**0**	**0**	**2,261**	**2,261**
1,1,1-TRICHLOROETHANE											
ALLOY SURFACES		0	0	500	0	0	500	0	0	0	0
CHEMICAL TOTALS	**71-55-6**	**0**	**0**	**500**	**0**	**0**	**500**	**0**	**0**	**0**	**0**
TRICHLOROETHYLENE											
CAMDEL METALS		0	0	5,190	0	0	5,190	0	0	13,000,000	13,000,000
RITE-OFF (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**79-01-6**	**0**	**0**	**5,190**	**0**	**0**	**5,190**	**0**	**0**	**13,000,000**	**13,000,000**
TRICHLOROFLUOROMETHANE											
DELMARVA POWER EDGE MOOR		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**75-69-4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1,2,4-TRIMETHYLBENZENE											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
DAIMLERCHRYSLER		2	0	10	0	5,780	5,792	9,600	0	0	9,600
GENERAL MOTORS		0	0	59	0	21,000	21,059	0	0	0	0
MOTIVA ENTERPRISES		0	0	4	0	0	4	370,000	0	0	370,000
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-MILFORD (1)		0	0	0	0	0	0	0	0	0	0
SICO (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**95-63-6**	**2**	**0**	**73**	**0**	**26,780**	**26,855**	**379,600**	**0**	**0**	**379,600**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX D - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY CHEMICAL

(in pounds)

	CAS NO.	OFF-SITE TRANSFERS DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	ON-SITE WASTE MANAGEMENT TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
VINYL ACETATE											
FORMOSA PLASTICS		0	0	0	0	0	0	0	0	0	0
REICHHOLD		0	11	0	458	0	469	2,460	0	0	2,460
CHEMICAL TOTALS	**108-05-4**	**0**	**11**	**0**	**458**	**0**	**469**	**2,460**	**0**	**0**	**2,460**
VINYL CHLORIDE											
FORMOSA PLASTICS		0	0	0	0	0	0	390,683	0	0	390,683
KANEKA		2	0	0	0	0	2	240,110	0	0	240,110
CHEMICAL TOTALS	**75-01-4**	**2**	**0**	**0**	**0**	**0**	**2**	**630,793**	**0**	**0**	**630,793**
XYLENE (MIXED ISOMERS)											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
ARLON		0	0	2,138	0	0	2,138	0	140,000	0	140,000
CARL KING (1)		0	0	0	0	0	0	0	0	0	0
CIBA SPECIALTY CHEMICALS		0	394	2,500	14,980	0	17,874	89	0	0	89
DAIMLERCHRYSLER		0	0	1	0	200,004	200,005	1,800	0	0	1,800
GENERAL MOTORS		0	0	5,140	0	250,000	255,140	18,000	0	0	18,000
MOTIVA ENTERPRISES		67	0	0	190	0	257	76,000	0	0	76,000
NANTICOKE HOMES		0	0	0	0	0	0	0	0	0	0
PENINSULA OIL-BLADES (1)		0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY-DOVER (1)		0	0	0	0	0	0	0	0	0	0
SICO		0	0	0	0	105	105	0	0	0	0
CHEMICAL TOTALS	**1330-20-7**	**67**	**394**	**9,779**	**15,170**	**450,109**	**475,519**	**95,889**	**140,000**	**0**	**235,889**
ZINC (FUME OR DUST)											
TOWNSENDS (1)		0	0	0	0	0	0	0	0	0	0
CHEMICAL TOTALS	**7440-66-6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ZINC COMPOUNDS											
ALLEN PETROLEUM (1)		0	0	0	0	0	0	0	0	0	0
ALLEN'S MILLING (1)		0	0	0	0	0	0	0	0	0	0
CITISTEEL USA		174	0	0	0	2,021,523	2,021,697	0	0	0	0
DAIMLERCHRYSLER		17,110	820	0	0	2,384	20,314	0	0	0	0
DELMARVA POWER EDGE MOOR		38,870	75	0	0	0	38,945	0	0	0	0
DELMARVA POWER INDIAN RIVER		2,595	0	0	0	0	2,595	0	0	0	0
GENERAL MOTORS		0	210	0	0	0	210	0	0	0	0
INSTEEL WIRE PRODUCTS		0	112	0	0	402,380	402,492	0	0	0	0
MOUNTAIRE FARMS FEEDMILL (1)		0	0	0	0	0	0	0	0	0	0
NVF YORKLYN		4,110	8,200	0	0	0	12,310	0	0	11,393,286	11,393,286
PERDUE BRIDGEVILLE (1)		0	0	0	0	0	0	0	0	0	0
PPG ARCHITECTURAL FINISHES		800	4	0	0	0	804	0	0	0	0
CHEMICAL TOTALS	**N982**	**63,659**	**9,421**	**0**	**0**	**2,426,287**	**2,499,367**	**0**	**0**	**11,393,286**	**11,393,286**
STATEWIDE TOTALS		**422,812**	**3,333,176**	**632,419**	**1,489,982**	**11,981,296**	**17,859,685**	**67,697,327**	**16,155,665**	**34,449,050**	**118,302,042**

(1) Submitted Form A for this chemical, which does not include waste amounts.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
AGRILINK FOODS					
AMMONIA	7664-41-7	9,889	0	0	9,889
FACILITY TOTALS		**9,889**	**0**	**0**	**9,889**
AIR LIQUIDE AMERICA					
AMMONIA	7664-41-7	33,420	0	0	33,420
FACILITY TOTALS		**33,420**	**0**	**0**	**33,420**
ALLEN PETROLEUM					
BENZENE (1)	71-43-2	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
ALLEN'S MILLING					
COPPER COMPOUNDS (1)	N100	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
ALLIEDSIGNAL					
AMMONIA	7664-41-7	4,820	0	0	4,820
BORON TRIFLUORIDE	7637-07-2	215	0	0	215
CHLOROETHANE (1)	75-00-3	0	0	0	0
1,3-DICHLOROPROPYLENE	542-75-6	50	0	0	50
N-HEXANE	110-54-3	19,775	0	0	19,775
TOLUENE	108-88-3	1,640	0	0	1,640
FACILITY TOTALS		**26,500**	**0**	**0**	**26,500**
ALLOY SURFACES					
NICKEL	7440-02-0	232	0	0	232
1,1,1-TRICHLOROETHANE	71-55-6	229	0	0	229
FACILITY TOTALS		**461**	**0**	**0**	**461**
AMERICAN MINERALS					
BARIUM	7440-39-3	106	0	0	106
CHROMIUM COMPOUNDS	N090	6,400	0	0	6,400
LEAD	7439-92-1	57	0	0	57
MANGANESE COMPOUNDS	N450	5,400	0	0	5,400
FACILITY TOTALS		**11,963**	**0**	**0**	**11,963**
AMETEK-HAVEG DIVISION					
FORMALDEHYDE (1)	50-00-0	0	0	0	0
PHENOL	108-95-2	5	0	0	5
FACILITY TOTALS		**5**	**0**	**0**	**5**
ARLON					
XYLENE (MIXED ISOMERS)	1330-20-7	3,800	0	0	3,800
FACILITY TOTALS		**3,800**	**0**	**0**	**3,800**
BARCROFT					
CHLORINE (1)	7782-50-5	0	0	0	0
NITRIC ACID (1)	7697-37-2	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
BRANDYWINE COMPOUNDING					

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
ANTIMONY COMPOUNDS	N010	0	0	0	0
COPPER COMPOUNDS	N100	0	0	0	0
DECABROMODIPHENYL OXIDE	1163-19-5	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
CAMDEL METALS					
CHROMIUM	7440-47-3	0	0	0	0
NICKEL	7440-02-0	0	0	0	0
TRICHLOROETHYLENE	79-01-6	5,730	0	0	5,730
FACILITY TOTALS		**5,730**	**0**	**0**	**5,730**
CARL KING					
BENZENE (1)	71-43-2	0	0	0	0
CYCLOHEXANE (1)	110-82-7	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
CHLORAMONE					
CHLORINE	7782-50-5	9	0	0	9
FACILITY TOTALS		**9**	**0**	**0**	**9**
CHROME DEPOSIT					
CHROMIUM COMPOUNDS	N090	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
CIBA SPECIALTY CHEMICALS					
ANILINE	62-53-3	55	0	0	55
BIPHENYL	92-52-4	716	0	0	716
P-CHLOROANILINE	106-47-8	76	0	0	76
CYCLOHEXANE	110-82-7	19	0	0	19
METHANOL	67-56-1	68,953	0	0	68,953
XYLENE (MIXED ISOMERS)	1330-20-7	282	0	0	282
FACILITY TOTALS		**70,101**	**0**	**0**	**70,101**
CITISTEEL USA					
CHROMIUM COMPOUNDS	N090	157	1	63	221
COPPER COMPOUNDS	N100	155	1	20	176
LEAD COMPOUNDS	N420	675	1	35	711
MANGANESE COMPOUNDS	N450	751	4	405	1,160
NICKEL COMPOUNDS	N495	28	0	24	52
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0
ZINC COMPOUNDS	N982	3,728	3	134	3,865
FACILITY TOTALS		**5,494**	**10**	**681**	**6,185**
D&B INDUSTRIAL GROUP					
METHYL ETHYL KETONE	78-93-3	7,000	0	0	7,000
FACILITY TOTALS		**7,000**	**0**	**0**	**7,000**
DAIMLERCHRYSLER					
BARIUM COMPOUNDS (1)	N040	0	0	0	0
BENZENE	71-43-2	111	0	0	111
N-BUTYL ALCOHOL	71-36-3	60,300	0	0	60,300
DIISOCYANATES	N120	1	0	0	1
ETHYLBENZENE	100-41-4	15,700	0	0	15,700
ETHYLENE GLYCOL	107-21-1	400	0	0	400
GLYCOL ETHERS	N230	176,000	0	0	176,000
MANGANESE COMPOUNDS	N450	0	0	0	0

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
METHANOL	67-56-1	3,800	0	0	3,800
METHYL ISOBUTYL KETONE	108-10-1	41,900	0	0	41,900
N-METHYL-2-PYRROLIDONE	872-50-4	13,500	0	0	13,500
METHYL TERT-BUTYL ETHER	1634-04-4	440	0	0	440
NICKEL COMPOUNDS	N495	0	0	0	0
NITRIC ACID	7697-37-2	150	0	0	150
PHOSPHORIC ACID	7664-38-2	390	0	0	390
SODIUM NITRITE	7632-00-0	0	0	0	0
TOLUENE	108-88-3	6,800	0	0	6,800
1,2,4-TRIMETHYLBENZENE	95-63-6	65,400	0	0	65,400
XYLENE (MIXED ISOMERS)	1330-20-7	57,100	0	0	57,100
ZINC COMPOUNDS	N982	2	0	0	2
FACILITY TOTALS		**441,994**	**0**	**0**	**441,994**
DELMARVA POWER EDGE MOOR					
AMMONIA	7664-41-7	21,861	7	0	21,868
BARIUM COMPOUNDS	N040	5,947	3,038	3,063	12,048
CHROMIUM COMPOUNDS	N090	1,092	1,518	1,346	3,956
COPPER COMPOUNDS	N100	1,811	10,296	788	12,895
ETHYLENE GLYCOL (1)	107-21-1	0	0	0	0
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	1,635,619	0	0	1,635,619
HYDROGEN FLUORIDE	7664-39-3	74,355	0	0	74,355
MANGANESE COMPOUNDS	N450	933	21,261	3,836	26,030
NICKEL COMPOUNDS	N495	18,132	1	899	19,032
NITRATE COMPOUNDS (1)	N511	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	203,050	0	0	203,050
TRICHLOROFLUOROMETHANE (1)	75-69-4	0	0	0	0
ZINC COMPOUNDS	N982	2,828	12,333	2,802	17,963
FACILITY TOTALS		**1,965,628**	**48,454**	**12,734**	**2,026,816**
DELMARVA POWER INDIAN RIVER					
ARSENIC COMPOUNDS	N020	2,253	0	35,424	37,677
BARIUM COMPOUNDS	N040	10,978	0	234,557	245,535
CHROMIUM COMPOUNDS	N090	1,125	830	37,637	39,592
COPPER COMPOUNDS	N100	645	1,425	45,860	47,930
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	2,980,941	0	0	2,980,941
HYDROGEN FLUORIDE	7664-39-3	142,476	0	0	142,476
LEAD COMPOUNDS	N420	2,252	986	36,462	39,700
MANGANESE COMPOUNDS	N450	1,588	42	63,537	65,167
NICKEL COMPOUNDS	N495	875	418	38,367	39,660
SULFURIC ACID (AEROSOL)	7664-93-9	199,167	0	0	199,167
ZINC COMPOUNDS	N982	2,668	7,585	86,001	96,254
FACILITY TOTALS		**3,344,968**	**11,286**	**577,845**	**3,934,099**
DENTSPLY/CAULK MAIN					
METHANOL	67-56-1	350	0	0	350
TOLUENE	108-88-3	195	0	0	195
FACILITY TOTALS		**545**	**0**	**0**	**545**
DENTSPLY/CAULK WEST					
METHANOL	67-56-1	59	0	0	59
METHYL METHACRYLATE	80-62-6	35	0	0	35
FACILITY TOTALS		**94**	**0**	**0**	**94**
DUPONT EDGE MOOR					
CARBONYL SULFIDE	463-58-1	290,000	0	0	290,000
CHLORINE	7782-50-5	2,458	0	0	2,458
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	10,403	0	0	10,403
PHOSGENE	75-44-5	800	0	0	800
TITANIUM TETRACHLORIDE	7550-45-0	30	0	0	30
TOLUENE	108-88-3	1,381	0	0	1,381

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Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
FACILITY TOTALS		**305,072**	**0**	**0**	**305,072**
DUPONT HOLLY RUN					
CHROMIUM COMPOUNDS	N090	787	4	33	824
FACILITY TOTALS		**787**	**4**	**33**	**824**
DUPONT SEAFORD					
BARIUM COMPOUNDS	N040	19,300	0	3,100	22,400
BIPHENYL	92-52-4	16,500	0	0	16,500
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	225,000	0	0	225,000
NITRATE COMPOUNDS	N511	0	669,000	0	669,000
PHOSPHORIC ACID	7664-38-2	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	111,000	0	0	111,000
FACILITY TOTALS		**371,800**	**669,000**	**3,100**	**1,043,900**
E-A-R SPECIALTY COMPOSITES					
DIISOCYANATES	N120	20	0	0	20
TOLUENEDIISOCYANATE (MIXED ISOMERS)	26471-62-5	20	0	0	20
FACILITY TOTALS		**40**	**0**	**0**	**40**
FIRST STATE POWER MANAGEMENT					
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	1,304,287	0	0	1,304,287
HYDROGEN FLUORIDE	7664-39-3	157,887	0	0	157,887
SULFURIC ACID (AEROSOL)	7664-93-9	45,863	0	0	45,863
FACILITY TOTALS		**1,508,037**	**0**	**0**	**1,508,037**
FLAIR-NEW CASTLE					
CHLORODIFLUOROMETHANE	75-45-6	10	0	0	10
COPPER	7440-50-8	10	0	0	10
FACILITY TOTALS		**20**	**0**	**0**	**20**
FORMOSA PLASTICS					
AMMONIA	7664-41-7	6,972	0	0	6,972
VINYL ACETATE	108-05-4	9,852	0	0	9,852
VINYL CHLORIDE	75-01-4	115,153	0	0	115,153
FACILITY TOTALS		**131,977**	**0**	**0**	**131,977**
GAC SEAFORD					
POLYCYCLIC AROMATIC COMPOUNDS (1)	N590	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
GENERAL CHEMICAL					
AMMONIA	7664-41-7	1,064	2,100	0	3,164
HYDROGEN FLUORIDE	7664-39-3	1,282	0	0	1,282
LEAD COMPOUNDS	N420	358	0	17	375
SULFURIC ACID (AEROSOL)	7664-93-9	27,000	0	0	27,000
FACILITY TOTALS		**29,704**	**2,100**	**17**	**31,821**
GENERAL MOTORS					
N-BUTYL ALCOHOL	71-36-3	33,058	0	0	33,058
COPPER	7440-50-8	7	0	0	7
ETHYLBENZENE	100-41-4	14,003	0	0	14,003
ETHYLENE GLYCOL	107-21-1	0	0	0	0
GLYCOL ETHERS	N230	66,400	0	0	66,400
METHANOL	67-56-1	16,400	0	0	16,400
METHYL ISOBUTYL KETONE	108-10-1	18,700	0	0	18,700
N-METHYL-2-PYRROLIDONE	872-50-4	31,100	0	0	31,100
METHYL TERT-BUTYL ETHER	1634-04-4	85	0	0	85
SODIUM NITRITE	7632-00-0	0	0	0	0
TOLUENE	108-88-3	11,160	0	0	11,160
1,2,4-TRIMETHYLBENZENE	95-63-6	9,402	0	0	9,402
XYLENE (MIXED ISOMERS)	1330-20-7	221,000	0	0	221,000

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APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
ZINC COMPOUNDS	N982	12	0	0	12
FACILITY TOTALS		**421,327**	**0**	**0**	**421,327**
HANOVER FOODS					
AMMONIA	7664-41-7	27,103	0	0	27,103
FACILITY TOTALS		**27,103**	**0**	**0**	**27,103**
HERCULES RESEARCH CENTER					
METHYL ETHYL KETONE	78-93-3	83	0	0	83
TOLUENE	108-88-3	204	0	0	204
FACILITY TOTALS		**287**	**0**	**0**	**287**
HEWLETT-PACKARD					
METHANOL	67-56-1	6,226	0	0	6,226
FACILITY TOTALS		**6,226**	**0**	**0**	**6,226**
HIRSH INDUSTRIES					
N-BUTYL ALCOHOL	71-36-3	10,200	0	0	10,200
GLYCOL ETHERS	N230	19,003	0	0	19,003
PHOSPHORIC ACID	7664-38-2	0	0	0	0
FACILITY TOTALS		**29,203**	**0**	**0**	**29,203**
INSTEEL WIRE PRODUCTS					
ZINC COMPOUNDS	N982	0	112	0	112
FACILITY TOTALS		**0**	**112**	**0**	**112**
JOHNSON CONTROLS					
ANTIMONY COMPOUNDS	N010	0	0	0	0
LEAD COMPOUNDS	N420	297	0	0	297
FACILITY TOTALS		**297**	**0**	**0**	**297**
KANEKA					
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	2,262	0	0	2,262
VINYL CHLORIDE	75-01-4	21,819	1	0	21,820
FACILITY TOTALS		**24,081**	**1**	**0**	**24,082**
KRAFT FOODS					
AMMONIA	7664-41-7	4	0	0	4
PHOSPHORIC ACID	7664-38-2	8,467	0	0	8,467
FACILITY TOTALS		**8,471**	**0**	**0**	**8,471**
MACDERMID					
METHANOL	67-56-1	909	0	0	909
METHYL ETHYL KETONE	78-93-3	27,040	0	0	27,040
TOLUENEDIISOCYANATE (MIXED ISOMERS)	26471-62-5	20	0	0	20
FACILITY TOTALS		**27,969**	**0**	**0**	**27,969**
MARBLE WORKS					
STYRENE	100-42-5	1,967	0	0	1,967
FACILITY TOTALS		**1,967**	**0**	**0**	**1,967**
MEDAL					
N-HEXANE	110-54-3	12,800	0	0	12,800
METHANOL	67-56-1	1,400	0	0	1,400
N-METHYL-2-PYRROLIDONE	872-50-4	600	0	0	600
FACILITY TOTALS		**14,800**	**0**	**0**	**14,800**
METACHEM PRODUCTS					
BENZENE	71-43-2	14,108	5	0	14,113
CHLORINE	7782-50-5	81	0	0	81
CHLOROBENZENE	108-90-7	18,894	7	0	18,901
1,3-DICHLOROBENZENE	541-73-1	1,758	10	0	1,768

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APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
1,2-DICHLOROBENZENE	95-50-1	11,616	36	0	11,652
1,4-DICHLOROBENZENE	106-46-7	36,062	107	0	36,169
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	5,652	0	0	5,652
1,2,4-TRICHLOROBENZENE	120-82-1	10,270	15	0	10,285
FACILITY TOTALS		**98,441**	**180**	**0**	**98,621**
MFG JUSTIN TANKS					
STYRENE	100-42-5	18,500	0	0	18,500
FACILITY TOTALS		**18,500**	**0**	**0**	**18,500**
MOTIVA ENTERPRISES					
AMMONIA	7664-41-7	340	3,400	0	3,740
BENZENE	71-43-2	9,210	83	0	9,293
1,3-BUTADIENE	106-99-0	1,324	0	0	1,324
N-BUTYL ALCOHOL	71-36-3	0	170	0	170
TERT-BUTYL ALCOHOL (1)	75-65-0	0	0	0	0
CRESOL (MIXED ISOMERS)	1319-77-3	0	59	0	59
CUMENE	98-82-8	300	0	0	300
CYCLOHEXANE	110-82-7	730	33	0	763
1,2-DICHLOROPROPANE (1)	78-87-5	0	0	0	0
DIETHANOLAMINE	111-42-2	0	880	0	880
ETHYLBENZENE	100-41-4	1,790	190	22	2,002
ETHYLENE	74-85-1	1,018	0	0	1,018
N-HEXANE	110-54-3	4,900	0	1	4,901
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	88,000	0	0	88,000
MANGANESE COMPOUNDS	N450	190	0	28,800	28,990
METHANOL	67-56-1	7,700	29,000	0	36,700
METHYL TERT-BUTYL ETHER	1634-04-4	38,000	0	0	38,000
MOLYBDENUM TRIOXIDE	1313-27-5	15	0	2,830	2,845
NAPHTHALENE	91-20-3	2,585	0	0	2,585
NICKEL COMPOUNDS	N495	2,400	7,200	250,000	259,600
NITRATE COMPOUNDS	N511	0	670	0	670
PHENOL	108-95-2	0	130	0	130
PHOSPHORIC ACID	7664-38-2	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS	N590	13	33	9	55
PROPYLENE	115-07-1	5,400	0	0	5,400
SODIUM NITRITE	7632-00-0	0	15,000	0	15,000
STYRENE	100-42-5	22	0	0	22
SULFURIC ACID (AEROSOL)	7664-93-9	1,400,000	0	0	1,400,000
TETRACHLOROETHYLENE (1)	127-18-4	0	0	0	0
TOLUENE	108-88-3	6,400	77	0	6,477
1,2,4-TRIMETHYLBENZENE	95-63-6	1,860	410	0	2,270
XYLENE (MIXED ISOMERS)	1330-20-7	8,300	84	0	8,384
FACILITY TOTALS		**1,580,497**	**57,419**	**281,662**	**1,919,578**
MOUNTAIRE FARMS FEEDMILL					
COPPER COMPOUNDS (1)	N100	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
NANTICOKE HOMES					
DIISOCYANATES	N120	0	0	0	0
ETHYLENE GLYCOL	107-21-1	32,636	0	0	32,636
TOLUENE	108-88-3	10,940	0	0	10,940
XYLENE (MIXED ISOMERS)	1330-20-7	10,320	0	0	10,320
FACILITY TOTALS		**53,896**	**0**	**0**	**53,896**
NORAMCO					
1,3-DICHLOROBENZENE	541-73-1	400	0	0	400
DICHLOROMETHANE	75-09-2	3,100	0	0	3,100

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APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
ETHYLENE GLYCOL	107-21-1	0	0	0	0
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	100	0	0	100
METHANOL	67-56-1	2,000	0	0	2,000
METHYL ISOBUTYL KETONE	108-10-1	3,200	0	0	3,200
SULFURIC ACID (AEROSOL)	7664-93-9	10	0	0	10
TOLUENE	108-88-3	800	0	0	800
FACILITY TOTALS		**9,610**	**0**	**0**	**9,610**
NVF YORKLYN					
ZINC COMPOUNDS	N982	0	18,250	0	18,250
FACILITY TOTALS		**0**	**18,250**	**0**	**18,250**
OCCIDENTAL CHEMICAL					
CHLORINE	7782-50-5	2,191	0	0	2,191
CHLOROFORM	67-66-3	1,719	0	0	1,719
MERCURY	7439-97-6	1,074	18	0	1,092
SODIUM NITRITE	7632-00-0	0	0	0	0
FACILITY TOTALS		**4,984**	**18**	**0**	**5,002**
ORIENT					
ANILINE	62-53-3	2,841	0	0	2,841
CHROMIUM COMPOUNDS	N090	0	0	0	0
NITROBENZENE	98-95-3	234	0	0	234
FACILITY TOTALS		**3,075**	**0**	**0**	**3,075**
PENINSULA OIL-BLADES					
BENZENE (1)	71-43-2	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
PEPSI-COLA BOTTLING					
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
PERDUE BRIDGEVILLE					
COPPER COMPOUNDS (1)	N100	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
PERDUE GEORGETOWN					
AMMONIA	7664-41-7	12,000	120	30	12,150
PHOSPHORIC ACID	7664-38-2	0	0	0	0
FACILITY TOTALS		**12,000**	**120**	**30**	**12,150**
PERDUE MILFORD					
AMMONIA	7664-41-7	0	0	10	10
FACILITY TOTALS		**0**	**0**	**10**	**10**
PERMA-FLEX					
4,4'-METHYLENEBIS(2-CHLOROANILINE)	101-14-4	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
PLAYTEX APPAREL					
NITRATE COMPOUNDS	N511	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**

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APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
PLAYTEX PRODUCTS					
CHLORINE	7782-50-5	7	0	0	7
NITRIC ACID	7697-37-2	37	0	0	37
FACILITY TOTALS		**44**	**0**	**0**	**44**
PPG ARCHITECTURAL FINISHES					
CHLOROALLYL METHENAMINE CHLORIDE (1)(2)	4080-31-3	0	0	0	0
ETHYLENE GLYCOL	107-21-1	1	0	0	1
GLYCOL ETHERS (1)	N230	0	0	0	0
ZINC COMPOUNDS	N982	72	0	0	72
FACILITY TOTALS		**73**	**0**	**0**	**73**
PRINTPACK					
OZONE	10028-15-6	252	0	0	252
FACILITY TOTALS		**252**	**0**	**0**	**252**
REICHHOLD					
ACRYLIC ACID	79-10-7	1,125	0	0	1,125
ACRYLONITRILE	107-13-1	6,231	0	0	6,231
AMMONIA	7664-41-7	2,356	0	0	2,356
1,3-BUTADIENE	106-99-0	28,334	0	0	28,334
BUTYL ACRYLATE	141-32-2	591	0	0	591
ETHYL ACRYLATE	140-88-5	464	0	0	464
FORMALDEHYDE	50-00-0	1,965	0	0	1,965
METHANOL	67-56-1	15	0	0	15
METHYL METHACRYLATE	80-62-6	1,916	0	0	1,916
N-METHYLOLACRYLAMIDE	924-42-5	410	0	0	410
STYRENE	100-42-5	6,020	0	0	6,020
VINYL ACETATE	108-05-4	2,249	0	0	2,249
FACILITY TOTALS		**51,676**	**0**	**0**	**51,676**
RITE-OFF					
1,1-DICHLORO-1-FLUOROETHANE	1717-00-6	1,800	0	0	1,800
DICHLOROMETHANE	75-09-2	1,182	0	0	1,182
GLYCOL ETHERS (1)	N230	0	0	0	0
N-HEXANE	110-54-3	49	0	0	49
TETRACHLOROETHYLENE	127-18-4	530	0	0	530
TRICHLOROETHYLENE (1)	79-01-6	0	0	0	0
FACILITY TOTALS		**3,561**	**0**	**0**	**3,561**
RODEL					
DIISOCYANATES	N120	2	0	0	2
N,N-DIMETHYLFORMAMIDE	68-12-2	74,668	0	0	74,668
METHYL ETHYL KETONE	78-93-3	17,180	0	0	17,180
PHTHALIC ANHYDRIDE (1)	85-44-9	0	0	0	0
FACILITY TOTALS		**91,850**	**0**	**0**	**91,850**
RODEL TECHNICAL CENTER					
N-METHYL-2-PYRROLIDONE	872-50-4	1,024	0	0	1,024
4,4'-METHYLENEBIS(2-CHLOROANILINE)	101-14-4	2	0	0	2
FACILITY TOTALS		**1,026**	**0**	**0**	**1,026**
ROLLER SERVICE					
DI(2-ETHYLHEXYL) PHTHALATE (1)	117-81-7	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
S.C. JOHNSON POLYMER					
AMMONIA	7664-41-7	1,234	0	0	1,234
BUTYL ACRYLATE (1)	141-32-2	0	0	0	0
ETHYL ACRYLATE (1)	140-88-5	0	0	0	0
GLYCOL ETHERS (1)	N230	0	0	0	0
METHYL METHACRYLATE	80-62-6	194	0	0	194

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
STYRENE	100-42-5	234	0	0	234
FACILITY TOTALS		**1,662**	**0**	**0**	**1,662**
SERVICE ENERGY-DOVER					
BENZENE (1)	71-43-2	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
SERVICE ENERGY-MILFORD					
TOLUENE (1)	108-88-3	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**
SICO					
BENZENE (1)	71-43-2	0	0	0	0
CYCLOHEXANE (1)	110-82-7	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0
METHYL TERT-BUTYL ETHER	1634-04-4	900	0	0	900
NAPHTHALENE	91-20-3	50	0	0	50
TOLUENE	108-88-3	1,100	0	0	1,100
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0
XYLENE (MIXED ISOMERS)	1330-20-7	50	0	0	50
FACILITY TOTALS		**2,100**	**0**	**0**	**2,100**
SPATZ FIBERGLASS					
STYRENE	100-42-5	4,799	0	0	4,799
FACILITY TOTALS		**4,799**	**0**	**0**	**4,799**
SPI POLYOLS					
NICKEL	7440-02-0	678	0	10	688
NITRIC ACID	7697-37-2	10	0	0	10
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0
FACILITY TOTALS		**688**	**0**	**10**	**698**
SUNOCO MARCUS HOOK REFINERY					
ETHYLENE	74-85-1	27,200	0	0	27,200
ETHYLENE OXIDE	75-21-8	3,970	0	0	3,970
FACILITY TOTALS		**31,170**	**0**	**0**	**31,170**
TOWNSENDS					
AMMONIA	7664-41-7	4,769	0	13,995	18,764
ATRAZINE	1912-24-9	0	0	15,101	15,101
COPPER COMPOUNDS (1)	N100	0	0	0	0
DIMETHOATE	60-51-5	0	0	19,975	19,975
ETHYLENE GLYCOL	107-21-1	0	0	12,345	12,345
N-HEXANE	110-54-3	269,716	0	0	269,716
MANGANESE (1)	7439-96-5	0	0	0	0
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0
PHOSPHORUS (YELLOW OR WHITE)	7723-14-0	3,252	0	0	3,252
ZINC (FUME OR DUST) (1)	7440-66-6	0	0	0	0
FACILITY TOTALS		**277,737**	**0**	**61,416**	**339,153**
UNIQEMA					
BIS(2-CHLOROETHYL) ETHER	111-44-4	83	0	0	83
ETHYLENE OXIDE	75-21-8	11,474	0	0	11,474
GLYCOL ETHERS	N230	37	0	0	37

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX E

1998 DELAWARE TRI ON-SITE RELEASES BY FACILITY

(in pounds)

	CAS NO.	AIR	WATER	LAND	TOTAL
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	960	0	0	960
NAPHTHALENE	91-20-3	2	0	0	2
PHENOL	108-95-2	66	0	0	66
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0
PROPYLENE OXIDE	75-56-9	1,103	0	0	1,103
FACILITY TOTALS		**13,725**	**0**	**0**	**13,725**
WILMINGTON LEATHER COATINGS					
DIISOCYANATES (1)	N120	0	0	0	0
N-METHYL-2-PYRROLIDONE	872-50-4	30	0	0	30
FACILITY TOTALS		**30**	**0**	**0**	**30**
ZENECA SPECIALTIES					
CHLOROMETHANE	74-87-3	178	0	0	178
COPPER COMPOUNDS	N100	0	0	0	0
ETHYLENE GLYCOL	107-21-1	19	0	0	19
FORMIC ACID	64-18-6	57	0	0	57
GLYCOL ETHERS	N230	0	0	0	0
METHANOL	67-56-1	4,656	0	0	4,656
TOLUENE	108-88-3	19	0	0	19
FACILITY TOTALS		**4,929**	**0**	**0**	**4,929**
STATEWIDE TOTALS		**11,103,094**	**806,954**	**937,538**	**12,847,586**

(1) Submitted Form A for this chemical, which does not include data on releases.
(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride
Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
AGRILINK FOODS											
AMMONIA	7664-41-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
AIR LIQUIDE AMERICA											
AMMONIA	7664-41-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ALLEN PETROLEUM											
BENZENE (1)	71-43-2	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0	0	0	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0	0	0	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0	0	0	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ALLEN'S MILLING											
COPPER COMPOUNDS (1)	N100	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ALLIEDSIGNAL											
AMMONIA	7664-41-7	0	0	2,725	0	0	2,725	0	0	0	0
BORON TRIFLUORIDE	7637-07-2	0	0	5	35	0	40	0	0	0	0
CHLOROETHANE (1)	75-00-3	0	0	0	0	0	0	0	0	0	0
1,3-DICHLOROPROPYLENE	542-75-6	0	0	166	16,645	0	16,811	0	0	0	0
N-HEXANE	110-54-3	0	0	8,510	84,660	0	93,170	0	0	0	0
TOLUENE	108-88-3	0	0	2,005	26,700	0	28,705	0	0	0	0
FACILITY TOTALS		**0**	**0**	**13,411**	**128,040**	**0**	**141,451**	**0**	**0**	**0**	**0**
ALLOY SURFACES											
NICKEL	7440-02-0	232	0	0	0	0	232	0	0	0	0
1,1,1-TRICHLOROETHANE	71-55-6	0	0	500	0	0	500	0	0	0	0
FACILITY TOTALS		**232**	**0**	**500**	**0**	**0**	**732**	**0**	**0**	**0**	**0**
AMERICAN MINERALS											
BARIUM	7440-39-3	0	0	0	0	0	0	0	0	0	0
CHROMIUM COMPOUNDS	N090	0	0	0	0	0	0	0	0	0	0
LEAD	7439-92-1	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS	N450	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
AMETEK-HAVEG DIVISION											
FORMALDEHYDE (1)	50-00-0	0	0	0	0	0	0	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
PHENOL	108-95-2	0	5	0	0	0	5	318	0	280	598
FACILITY TOTALS		**0**	**5**	**0**	**0**	**0**	**5**	**318**	**0**	**280**	**598**
ARLON											
XYLENE (MIXED ISOMERS)	1330-20-7	0	0	2,138	0	0	2,138	0	140,000	0	140,000
FACILITY TOTALS		**0**	**0**	**2,138**	**0**	**0**	**2,138**	**0**	**140,000**	**0**	**140,000**
BARCROFT											
CHLORINE (1)	7782-50-5	0	0	0	0	0	0	0	0	0	0
NITRIC ACID (1)	7697-37-2	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
BRANDYWINE COMPOUNDING											
ANTIMONY COMPOUNDS	N010	593	0	0	0	0	593	0	0	0	0
COPPER COMPOUNDS	N100	955	0	0	0	0	955	0	0	0	0
DECABROMODIPHENYL OXIDE	1163-19-5	2,122	0	0	0	0	2,122	0	0	0	0
FACILITY TOTALS		**3,670**	**0**	**0**	**0**	**0**	**3,670**	**0**	**0**	**0**	**0**
CAMDEL METALS											
CHROMIUM	7440-47-3	83	0	0	0	0	83	0	0	0	0
NICKEL	7440-02-0	2	0	0	0	0	2	0	0	0	0
TRICHLOROETHYLENE	79-01-6	0	0	5,190	0	0	5,190	0	0	13,000,000	13,000,000
FACILITY TOTALS		**85**	**0**	**5,190**	**0**	**0**	**5,275**	**0**	**0**	**13,000,000**	**13,000,000**
CARL KING											
BENZENE (1)	71-43-2	0	0	0	0	0	0	0	0	0	0
CYCLOHEXANE (1)	110-82-7	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0	0	0	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0	0	0	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0	0	0	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CHLORAMONE											
CHLORINE	7782-50-5	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CHROME DEPOSIT											
CHROMIUM COMPOUNDS	N090	960	0	0	0	1,400	2,360	0	0	3,000	3,000
FACILITY TOTALS		**960**	**0**	**0**	**0**	**1,400**	**2,360**	**0**	**0**	**3,000**	**3,000**
CIBA SPECIALTY CHEMICALS											
ANILINE	62-53-3	0	59,170	14,220	220	0	73,610	0	0	0	0
BIPHENYL	92-52-4	0	162,140	48,860	44,260	15,760	271,020	2,290	0	0	2,290
P-CHLOROANILINE	106-47-8	0	2,684	3,540	520	0	6,744	0	0	0	0
CYCLOHEXANE	110-82-7	0	3,686	5,500	500	0	9,686	1,051	0	0	1,051
METHANOL	67-56-1	0	1,951,863	100,160	22,100	1,725,100	3,799,223	258,955	0	3,894	262,849

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
XYLENE (MIXED ISOMERS)	1330-20-7	0	394	2,500	14,980	0	17,874	89	0	0	89
FACILITY TOTALS		**0**	**2,179,937**	**174,780**	**82,580**	**1,740,860**	**4,178,157**	**262,385**	**0**	**3,894**	**266,279**
CITISTEEL USA											
CHROMIUM COMPOUNDS	N090	723	0	0	0	26,888	27,611	0	0	0	0
COPPER COMPOUNDS	N100	7,055	0	0	0	31,633	38,688	0	0	0	0
LEAD COMPOUNDS	N420	76	0	0	0	285,682	285,758	0	0	0	0
MANGANESE COMPOUNDS	N450	5,740	0	0	0	193,750	199,490	0	0	0	0
NICKEL COMPOUNDS	N495	1,716	0	0	0	3,064	4,780	0	0	0	0
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS	N982	174	0	0	0	2,021,523	2,021,697	0	0	0	0
FACILITY TOTALS		**15,484**	**0**	**0**	**0**	**2,562,540**	**2,578,024**	**0**	**0**	**0**	**0**
D&B INDUSTRIAL GROUP											
METHYL ETHYL KETONE	78-93-3	0	0	0	7,000	0	7,000	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**7,000**	**0**	**7,000**	**0**	**0**	**0**	**0**
DAIMLERCHRYSLER											
BARIUM COMPOUNDS (1)	N040	0	0	0	0	0	0	0	0	0	0
BENZENE	71-43-2	0	0	0	0	0	0	550	0	0	550
N-BUTYL ALCOHOL	71-36-3	3	0	0	0	4,573	4,576	8,300	0	0	8,300
DIISOCYANATES	N120	0	0	2,900	0	0	2,900	0	0	0	0
ETHYLBENZENE	100-41-4	0	0	0	0	65,000	65,000	440	0	0	440
ETHYLENE GLYCOL	107-21-1	0	500	0	0	0	500	0	0	0	0
GLYCOL ETHERS	N230	672	240,000	5,130	360	34	246,196	33,000	0	0	33,000
MANGANESE COMPOUNDS	N450	5,370	280	0	0	760	6,410	0	0	0	0
METHANOL	67-56-1	0	0	150	0	0	150	0	0	0	0
METHYL ISOBUTYL KETONE	108-10-1	0	0	110	240	170,000	170,350	0	0	0	0
N-METHYL-2-PYRROLIDONE	872-50-4	0	0	0	0	15	15	1,700	0	0	1,700
METHYL TERT-BUTYL ETHER	1634-04-4	0	0	0	0	0	0	1,700	0	0	1,700
NICKEL COMPOUNDS	N495	3,080	740	0	0	2,000	5,820	0	0	0	0
NITRIC ACID	7697-37-2	0	0	0	0	0	0	1,400	0	0	1,400
PHOSPHORIC ACID	7664-38-2	0	0	0	0	0	0	3,500	0	0	3,500
SODIUM NITRITE	7632-00-0	0	740	0	0	0	740	0	0	0	0
TOLUENE	108-88-3	0	0	150	0	3	153	2,000	0	0	2,000
1,2,4-TRIMETHYLBENZENE	95-63-6	2	0	10	0	5,780	5,792	9,600	0	0	9,600
XYLENE (MIXED ISOMERS)	1330-20-7	0	0	1	0	200,004	200,005	1,800	0	0	1,800
ZINC COMPOUNDS	N982	17,110	820	0	0	2,384	20,314	0	0	0	0
FACILITY TOTALS		**26,237**	**243,080**	**8,451**	**600**	**450,553**	**728,921**	**63,990**	**0**	**0**	**63,990**
DELMARVA POWER EDGE MOOR											
AMMONIA	7664-41-7	0	0	300	0	0	300	0	0	0	0
BARIUM COMPOUNDS	N040	111,635	0	0	0	0	111,635	0	0	0	0
CHROMIUM COMPOUNDS	N090	17,661	4	0	0	0	17,665	0	0	0	0
COPPER COMPOUNDS	N100	23,517	19	0	0	0	23,536	0	0	0	0
ETHYLENE GLYCOL (1)	107-21-1	0	0	0	0	0	0	0	0	0	0
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	0	0	0	0
HYDROGEN FLUORIDE	7664-39-3	0	0	0	0	0	0	74,314	0	0	74,314

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
MANGANESE COMPOUNDS	N450	28,749	0	0	0	0	28,749	0	0	0	0
NICKEL COMPOUNDS	N495	20,438	10	0	0	0	20,448	0	0	0	0
NITRATE COMPOUNDS (1)	N511	0	0	0	0	0	0	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	165,424	0	0	165,424
TRICHLOROFLUOROMETHANE (1)	75-69-4	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS	N982	38,870	75	0	0	0	38,945	0	0	0	0
FACILITY TOTALS		**240,870**	**108**	**300**	**0**	**0**	**241,278**	**239,738**	**0**	**0**	**239,738**
DELMARVA POWER INDIAN RIVER											
ARSENIC COMPOUNDS	N020	941	0	0	0	0	941	0	0	0	0
BARIUM COMPOUNDS	N040	7,173	0	0	0	0	7,173	0	0	0	0
CHROMIUM COMPOUNDS	N090	2,476	0	0	0	0	2,476	0	0	0	0
COPPER COMPOUNDS	N100	1,450	0	0	0	0	1,450	0	0	0	0
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	0	0	0	0
HYDROGEN FLUORIDE	7664-39-3	0	0	0	0	0	0	158,306	0	0	158,306
LEAD COMPOUNDS	N420	1,043	0	0	0	0	1,043	0	0	0	0
MANGANESE COMPOUNDS	N450	5,858	0	0	0	0	5,858	0	0	0	0
NICKEL COMPOUNDS	N495	1,198	0	0	0	0	1,198	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	528,623	0	0	528,623
ZINC COMPOUNDS	N982	2,595	0	0	0	0	2,595	0	0	0	0
FACILITY TOTALS		**22,734**	**0**	**0**	**0**	**0**	**22,734**	**686,929**	**0**	**0**	**686,929**
DENTSPLY/CAULK MAIN											
METHANOL	67-56-1	0	0	0	7,005	0	7,005	0	0	0	0
TOLUENE	108-88-3	0	0	0	3,903	0	3,903	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**10,908**	**0**	**10,908**	**0**	**0**	**0**	**0**
DENTSPLY/CAULK WEST											
METHANOL	67-56-1	0	0	0	11,743	0	11,743	0	0	0	0
METHYL METHACRYLATE	80-62-6	0	0	0	3,450	0	3,450	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**15,193**	**0**	**15,193**	**0**	**0**	**0**	**0**
DUPONT EDGE MOOR											
CARBONYL SULFIDE	463-58-1	0	0	0	0	0	0	0	0	0	0
CHLORINE	7782-50-5	0	0	0	0	0	0	4,100,000	0	0	4,100,000
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	25,000,000	0	0	25,000,000
PHOSGENE	75-44-5	0	0	0	0	0	0	40,000	0	0	40,000
TITANIUM TETRACHLORIDE	7550-45-0	0	0	0	0	0	0	2,000,000	0	0	2,000,000
TOLUENE	108-88-3	0	0	1,200	0	0	1,200	0	0	0	0
FACILITY TOTALS		**0**	**0**	**1,200**	**0**	**0**	**1,200**	**31,140,000**	**0**	**0**	**31,140,000**
DUPONT HOLLY RUN											
CHROMIUM COMPOUNDS	N090	6,200	423	0	0	0	6,623	0	0	0	0
FACILITY TOTALS		**6,200**	**423**	**0**	**0**	**0**	**6,623**	**0**	**0**	**0**	**0**
DUPONT SEAFORD											
BARIUM COMPOUNDS	N040	0	0	0	0	0	0	0	0	0	0
BIPHENYL	92-52-4	0	0	21,000	0	0	21,000	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	0	0	0	0
NITRATE COMPOUNDS	N511	0	0	13	0	0	13	0	0	0	0
PHOSPHORIC ACID	7664-38-2	0	0	0	0	0	0	28,000	0	0	28,000
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**21,013**	**0**	**0**	**21,013**	**28,000**	**0**	**0**	**28,000**
E-A-R SPECIALTY COMPOSITES											
DIISOCYANATES	N120	0	0	1,796	0	0	1,796	0	0	0	0
TOLUENEDIISOCYANATE (MIXED ISOMERS)	26471-62-5	0	0	2,891	0	0	2,891	0	0	0	0
FACILITY TOTALS		**0**	**0**	**4,687**	**0**	**0**	**4,687**	**0**	**0**	**0**	**0**
FIRST STATE POWER MANAGEMENT											
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	0	0	0	0
HYDROGEN FLUORIDE	7664-39-3	0	0	0	0	0	0	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
FLAIR-NEW CASTLE											
CHLORODIFLUOROMETHANE	75-45-6	0	0	0	0	189	189	0	0	0	0
COPPER	7440-50-8	0	0	0	0	11,120	11,120	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**11,309**	**11,309**	**0**	**0**	**0**	**0**
FORMOSA PLASTICS											
AMMONIA	7664-41-7	0	0	0	0	0	0	0	0	0	0
VINYL ACETATE	108-05-4	0	0	0	0	0	0	0	0	0	0
VINYL CHLORIDE	75-01-4	0	0	0	0	0	0	390,683	0	0	390,683
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**390,683**	**0**	**0**	**390,683**
GAC SEAFORD											
POLYCYCLIC AROMATIC COMPOUNDS (1)	N590	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GENERAL CHEMICAL											
AMMONIA	7664-41-7	0	6,100	0	0	0	6,100	55,000	0	0	55,000
HYDROGEN FLUORIDE	7664-39-3	0	0	0	0	0	0	7,800	0	0	7,800
LEAD COMPOUNDS	N420	1,117	364	0	0	0	1,481	0	0	0	0
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	1,540,000	0	0	1,540,000
FACILITY TOTALS		**1,117**	**6,464**	**0**	**0**	**0**	**7,581**	**1,602,800**	**0**	**0**	**1,602,800**
GENERAL MOTORS											
N-BUTYL ALCOHOL	71-36-3	0	0	1,032	0	0	1,032	8,000	0	0	8,000
COPPER	7440-50-8	0	0	0	0	5,400	5,400	0	0	0	0
ETHYLBENZENE	100-41-4	0	0	39	0	0	39	0	0	0	0
ETHYLENE GLYCOL	107-21-1	0	940	0	0	0	940	0	0	0	0
GLYCOL ETHERS	N230	0	50,000	0	0	0	50,000	41,000	0	0	41,000
METHANOL	67-56-1	0	0	322	0	21,000	21,322	4,800	0	0	4,800
METHYL ISOBUTYL KETONE	108-10-1	0	0	0	0	0	0	14,000	0	0	14,000
N-METHYL-2-PYRROLIDONE	872-50-4	0	0	0	0	0	0	1,300	0	0	1,300
METHYL TERT-BUTYL ETHER	1634-04-4	0	0	570	0	0	570	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
SODIUM NITRITE	7632-00-0	0	5,600	0	0	0	5,600	0	0	0	0
TOLUENE	108-88-3	0	0	243	0	0	243	22	0	0	22
1,2,4-TRIMETHYLBENZENE	95-63-6	0	0	59	0	21,000	21,059	0	0	0	0
XYLENE (MIXED ISOMERS)	1330-20-7	0	0	5,140	0	250,000	255,140	18,000	0	0	18,000
ZINC COMPOUNDS	N982	0	210	0	0	0	210	0	0	0	0
FACILITY TOTALS		**0**	**56,750**	**7,405**	**0**	**297,400**	**361,555**	**87,122**	**0**	**0**	**87,122**
HANOVER FOODS											
AMMONIA	7664-41-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
HERCULES RESEARCH CENTER											
METHYL ETHYL KETONE	78-93-3	0	0	620	33,400	0	34,020	0	0	0	0
TOLUENE	108-88-3	0	0	13,284	100,600	0	113,884	0	0	0	0
FACILITY TOTALS		**0**	**0**	**13,904**	**134,000**	**0**	**147,904**	**0**	**0**	**0**	**0**
HEWLETT-PACKARD											
METHANOL	67-56-1	0	0	0	9,179	0	9,179	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**9,179**	**0**	**9,179**	**0**	**0**	**0**	**0**
HIRSH INDUSTRIES											
N-BUTYL ALCOHOL	71-36-3	0	0	0	0	0	0	0	0	0	0
GLYCOL ETHERS	N230	0	0	0	0	0	0	0	0	0	0
PHOSPHORIC ACID	7664-38-2	0	5	18,765	0	0	18,770	0	0	0	0
FACILITY TOTALS		**0**	**5**	**18,765**	**0**	**0**	**18,770**	**0**	**0**	**0**	**0**
INSTEEL WIRE PRODUCTS											
ZINC COMPOUNDS	N982	0	112	0	0	402,380	402,492	0	0	0	0
FACILITY TOTALS		**0**	**112**	**0**	**0**	**402,380**	**402,492**	**0**	**0**	**0**	**0**
JOHNSON CONTROLS											
ANTIMONY COMPOUNDS	N010	0	0	0	0	25,536	25,536	0	0	0	0
LEAD COMPOUNDS	N420	10	13	19	0	6,376,098	6,376,140	0	0	0	0
FACILITY TOTALS		**10**	**13**	**19**	**0**	**6,401,634**	**6,401,676**	**0**	**0**	**0**	**0**
KANEKA											
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	135,828	0	0	135,828
VINYL CHLORIDE	75-01-4	2	0	0	0	0	2	240,110	0	0	240,110
FACILITY TOTALS		**2**	**0**	**0**	**0**	**0**	**2**	**375,938**	**0**	**0**	**375,938**
KRAFT FOODS											
AMMONIA	7664-41-7	0	850	0	0	0	850	61,000	0	0	61,000
PHOSPHORIC ACID	7664-38-2	0	0	0	0	0	0	27,000	0	0	27,000
FACILITY TOTALS		**0**	**850**	**0**	**0**	**0**	**850**	**88,000**	**0**	**0**	**88,000**
MACDERMID											
METHANOL	67-56-1	0	0	502	11,186	0	11,688	0	11,017	0	11,017
METHYL ETHYL KETONE	78-93-3	0	1,180	5,231	69,059	0	75,470	0	2,004,637	10,446	2,015,083
TOLUENEDIISOCYANATE (MIXED ISOMERS)	26471-62-5	0	0	0	0	0	0	1,006	0	0	1,006

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
FACILITY TOTALS		**0**	**1,180**	**5,733**	**80,245**	**0**	**87,158**	**1,006**	**2,015,654**	**10,446**	**2,027,106**
MARBLE WORKS											
STYRENE	100-42-5	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MEDAL											
N-HEXANE	110-54-3	0	0	15,500	0	0	15,500	0	0	1,350,000	1,350,000
METHANOL	67-56-1	0	0	35,872	0	0	35,872	0	0	1,500,000	1,500,000
N-METHYL-2-PYRROLIDONE	872-50-4	0	55,800	4,000	0	5,600	65,400	0	0	0	0
FACILITY TOTALS		**0**	**55,800**	**55,372**	**0**	**5,600**	**116,772**	**0**	**0**	**2,850,000**	**2,850,000**
METACHEM PRODUCTS											
BENZENE	71-43-2	0	0	269	0	0	269	0	0	207,800	207,800
CHLORINE	7782-50-5	0	0	0	0	0	0	0	0	0	0
CHLOROBENZENE	108-90-7	0	0	2,423	0	0	2,423	0	0	97,014	97,014
1,3-DICHLOROBENZENE	541-73-1	0	0	0	0	0	0	0	0	1,750	1,750
1,2-DICHLOROBENZENE	95-50-1	0	0	2,423	0	0	2,423	0	0	36,376	36,376
1,4-DICHLOROBENZENE	106-46-7	0	0	2,319	0	0	2,319	0	0	28,221	28,221
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	3,965,376	0	0	3,965,376
1,2,4-TRICHLOROBENZENE	120-82-1	0	0	23,484	0	0	23,484	0	0	2,261	2,261
FACILITY TOTALS		**0**	**0**	**30,918**	**0**	**0**	**30,918**	**3,965,376**	**0**	**373,422**	**4,338,798**
MFG JUSTIN TANKS											
STYRENE	100-42-5	0	0	510	0	0	510	0	0	0	0
FACILITY TOTALS		**0**	**0**	**510**	**0**	**0**	**510**	**0**	**0**	**0**	**0**
MOTIVA ENTERPRISES											
AMMONIA	7664-41-7	0	0	64	0	0	64	22,000	14,000,000	0	14,022,000
BENZENE	71-43-2	2	0	1	35	0	38	89,000	0	0	89,000
1,3-BUTADIENE	106-99-0	0	0	0	0	0	0	0	0	0	0
N-BUTYL ALCOHOL	71-36-3	0	0	0	0	0	0	17,000	0	0	17,000
TERT-BUTYL ALCOHOL (1)	75-65-0	0	0	0	0	0	0	0	0	0	0
CRESOL (MIXED ISOMERS)	1319-77-3	0	0	0	0	0	0	11,000	0	0	11,000
CUMENE	98-82-8	0	0	0	0	0	0	6,400	0	0	6,400
CYCLOHEXANE	110-82-7	0	0	17	0	0	17	49,000	0	0	49,000
1,2-DICHLOROPROPANE (1)	78-87-5	0	0	0	0	0	0	0	0	0	0
DIETHANOLAMINE	111-42-2	0	0	4	0	0	4	87,000	0	0	87,000
ETHYLBENZENE	100-41-4	12	0	0	46	0	58	180,000	0	0	180,000
ETHYLENE	74-85-1	0	0	0	0	0	0	900	0	0	900
N-HEXANE	110-54-3	0	0	0	0	0	0	93,000	0	0	93,000
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	930	0	0	930
MANGANESE COMPOUNDS	N450	0	0	0	0	0	0	0	0	0	0
METHANOL	67-56-1	0	0	4	0	0	4	17,000,000	0	0	17,000,000
METHYL TERT-BUTYL ETHER	1634-04-4	52	0	22	0	0	74	710,000	0	0	710,000
MOLYBDENUM TRIOXIDE	1313-27-5	0	0	0	0	0	0	0	0	0	0
NAPHTHALENE	91-20-3	371	0	0	8	0	379	12,000	0	0	12,000
NICKEL COMPOUNDS	N495	51	0	0	0	853	904	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
NITRATE COMPOUNDS	N511	0	0	0	0	0	0	1,100,000	0	0	1,100,000
PHENOL	108-95-2	0	0	0	0	0	0	23,000	0	0	23,000
PHOSPHORIC ACID	7664-38-2	0	0	0	0	39,000	39,000	280,000	0	0	280,000
POLYCYCLIC AROMATIC COMPOUNDS	N590	0	0	0	0	0	0	1,400	11	0	1,411
PROPYLENE	115-07-1	0	0	0	0	0	0	50,000	0	0	50,000
SODIUM NITRITE	7632-00-0	0	0	0	0	0	0	1,800,000	0	0	1,800,000
STYRENE	100-42-5	0	0	0	0	0	0	150	0	0	150
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	120,000	0	0	120,000
TETRACHLOROETHYLENE (1)	127-18-4	0	0	0	0	0	0	0	0	0	0
TOLUENE	108-88-3	30	0	0	200	0	230	200,000	0	0	200,000
1,2,4-TRIMETHYLBENZENE	95-63-6	0	0	4	0	0	4	370,000	0	0	370,000
XYLENE (MIXED ISOMERS)	1330-20-7	67	0	0	190	0	257	76,000	0	0	76,000
FACILITY TOTALS		**585**	**0**	**116**	**479**	**39,853**	**41,033**	**22,298,780**	**14,000,011**	**0**	**36,298,791**
MOUNTAIRE FARMS FEEDMILL											
COPPER COMPOUNDS (1)	N100	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NANTICOKE HOMES											
DIISOCYANATES	N120	0	0	0	0	0	0	0	0	0	0
ETHYLENE GLYCOL	107-21-1	0	0	0	0	0	0	0	0	0	0
TOLUENE	108-88-3	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS)	1330-20-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
NORAMCO											
1,3-DICHLOROBENZENE	541-73-1	0	1,000	0	0	0	1,000	0	0	0	0
DICHLOROMETHANE	75-09-2	0	111,000	0	50,000	0	161,000	0	0	0	0
ETHYLENE GLYCOL	107-21-1	0	0	0	0	8,000	8,000	0	0	0	0
HYDROCHLORIC ACID (AEROSOL)	7647-01-0	0	0	0	0	0	0	100,000	0	0	100,000
METHANOL	67-56-1	0	8,000	0	164,000	0	172,000	0	0	0	0
METHYL ISOBUTYL KETONE	108-10-1	0	45,000	0	232,700	0	277,700	0	0	1,265,000	1,265,000
SULFURIC ACID (AEROSOL)	7664-93-9	0	0	0	0	0	0	90	0	0	90
TOLUENE	108-88-3	0	86,000	0	84,000	0	170,000	0	0	0	0
FACILITY TOTALS		**0**	**251,000**	**0**	**530,700**	**8,000**	**789,700**	**100,090**	**0**	**1,265,000**	**1,365,090**
NVF YORKLYN											
ZINC COMPOUNDS	N982	4,110	8,200	0	0	0	12,310	0	0	11,393,286	11,393,286
FACILITY TOTALS		**4,110**	**8,200**	**0**	**0**	**0**	**12,310**	**0**	**0**	**11,393,286**	**11,393,286**
OCCIDENTAL CHEMICAL											
CHLORINE	7782-50-5	0	0	95	0	0	95	3,412,800	0	0	3,412,800
CHLOROFORM	67-66-3	0	0	9,430	0	0	9,430	0	0	0	0
MERCURY	7439-97-6	676	0	0	0	0	676	0	0	19,970	19,970
SODIUM NITRITE	7632-00-0	0	0	7,032	0	0	7,032	0	0	0	0
FACILITY TOTALS		**676**	**0**	**16,557**	**0**	**0**	**17,233**	**3,412,800**	**0**	**19,970**	**3,432,770**

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
ORIENT											
ANILINE	62-53-3	0	770	0	0	0	770	11,081	0	0	11,081
CHROMIUM COMPOUNDS	N090	0	0	0	0	0	0	0	0	0	0
NITROBENZENE	98-95-3	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**770**	**0**	**0**	**0**	**770**	**11,081**	**0**	**0**	**11,081**
PENINSULA OIL-BLADES											
BENZENE (1)	71-43-2	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0	0	0	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0	0	0	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0	0	0	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PEPSI-COLA BOTTLING											
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PERDUE BRIDGEVILLE											
COPPER COMPOUNDS (1)	N100	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS (1)	N450	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS (1)	N982	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PERDUE GEORGETOWN											
AMMONIA	7664-41-7	0	0	0	0	0	0	36,000	0	0	36,000
PHOSPHORIC ACID	7664-38-2	0	0	0	0	0	0	10,500	0	0	10,500
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**46,500**	**0**	**0**	**46,500**
PERDUE MILFORD											
AMMONIA	7664-41-7	0	260	0	0	0	260	0	0	0	0
FACILITY TOTALS		**0**	**260**	**0**	**0**	**0**	**260**	**0**	**0**	**0**	**0**
PERMA-FLEX											
4,4'-METHYLENEBIS(2-CHLOROANILINE)	101-14-4	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PLAYTEX APPAREL											
NITRATE COMPOUNDS	N511	0	48,000	0	0	0	48,000	0	0	0	0
FACILITY TOTALS		**0**	**48,000**	**0**	**0**	**0**	**48,000**	**0**	**0**	**0**	**0**
PLAYTEX PRODUCTS											
CHLORINE	7782-50-5	0	430	0	0	0	430	2,500	0	0	2,500
NITRIC ACID	7697-37-2	0	0	23,600	0	0	23,600	9,500	0	0	9,500
FACILITY TOTALS		**0**	**430**	**23,600**	**0**	**0**	**24,030**	**12,000**	**0**	**0**	**12,000**
PPG ARCHITECTURAL FINISHES											

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
CHLOROALLYL METHENAMINE CHLORIDE (1)(2)	4080-31-3	0	0	0	0	0	0	0	0	0	0
ETHYLENE GLYCOL	107-21-1	348	1,163	0	0	0	1,511	1	0	0	1
GLYCOL ETHERS (1)	N230	0	0	0	0	0	0	0	0	0	0
ZINC COMPOUNDS	N982	800	4	0	0	0	804	0	0	0	0
FACILITY TOTALS		**1,148**	**1,167**	**0**	**0**	**0**	**2,315**	**1**	**0**	**0**	**1**
PRINTPACK											
OZONE	10028-15-6	0	0	0	0	0	0	25,200	0	0	25,200
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**25,200**	**0**	**0**	**25,200**
REICHHOLD											
ACRYLIC ACID	79-10-7	0	0	0	0	0	0	1	0	0	1
ACRYLONITRILE	107-13-1	35	228	0	507	0	770	778,725	0	0	778,725
AMMONIA	7664-41-7	0	10	0	0	0	10	295	0	0	295
1,3-BUTADIENE	106-99-0	0	0	0	0	0	0	1,402,243	0	0	1,402,243
BUTYL ACRYLATE	141-32-2	0	2	0	620	0	622	78	0	0	78
ETHYL ACRYLATE	140-88-5	0	1	0	0	0	1	45	0	0	45
FORMALDEHYDE	50-00-0	0	0	0	0	0	0	0	0	0	0
METHANOL	67-56-1	0	10	0	0	0	10	296	0	0	296
METHYL METHACRYLATE	80-62-6	0	30	0	1,939	0	1,969	317	0	0	317
N-METHYLOLACRYLAMIDE	924-42-5	0	0	0	0	0	0	10	0	0	10
STYRENE	100-42-5	390	1,982	0	898	0	3,270	150,354	0	0	150,354
VINYL ACETATE	108-05-4	0	11	0	458	0	469	2,460	0	0	2,460
FACILITY TOTALS		**425**	**2,274**	**0**	**4,422**	**0**	**7,121**	**2,334,824**	**0**	**0**	**2,334,824**
RITE-OFF											
1,1-DICHLORO-1-FLUOROETHANE	1717-00-6	0	0	0	0	0	0	0	0	0	0
DICHLOROMETHANE	75-09-2	0	0	11,400	0	0	11,400	0	0	0	0
GLYCOL ETHERS (1)	N230	0	0	0	0	0	0	0	0	0	0
N-HEXANE	110-54-3	0	0	0	300	0	300	0	0	0	0
TETRACHLOROETHYLENE	127-18-4	0	0	4,500	0	0	4,500	0	0	0	0
TRICHLOROETHYLENE (1)	79-01-6	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**15,900**	**300**	**0**	**16,200**	**0**	**0**	**0**	**0**
RODEL											
DIISOCYANATES	N120	0	0	546	0	0	546	0	0	0	0
N,N-DIMETHYLFORMAMIDE	68-12-2	0	373,596	206,959	339,520	0	920,075	3,596	0	5,487,439	5,491,035
METHYL ETHYL KETONE	78-93-3	0	0	88	1,938	0	2,026	515,623	0	0	515,623
PHTHALIC ANHYDRIDE (1)	85-44-9	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**373,596**	**207,593**	**341,458**	**0**	**922,647**	**519,219**	**0**	**5,487,439**	**6,006,658**
RODEL TECHNICAL CENTER											
N-METHYL-2-PYRROLIDONE	872-50-4	0	0	0	15,483	0	15,483	0	0	0	0
4,4'-METHYLENEBIS(2-CHLOROANILINE)	101-14-4	0	0	2,903	0	0	2,903	0	0	0	0
FACILITY TOTALS		**0**	**0**	**2,903**	**15,483**	**0**	**18,386**	**0**	**0**	**0**	**0**
ROLLER SERVICE											
DI(2-ETHYLHEXYL) PHTHALATE (1)	117-81-7	0	0	0	0	0	0	0	0	0	0

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
S.C. JOHNSON POLYMER											
AMMONIA	7664-41-7	0	597	35	0	0	632	0	0	0	0
BUTYL ACRYLATE (1)	141-32-2	0	0	0	0	0	0	0	0	0	0
ETHYL ACRYLATE (1)	140-88-5	0	0	0	0	0	0	0	0	0	0
GLYCOL ETHERS (1)	N230	0	0	0	0	0	0	0	0	0	0
METHYL METHACRYLATE	80-62-6	0	1	35	0	0	36	934	0	161	1,095
STYRENE	100-42-5	0	1	101	0	0	102	296	0	152	448
FACILITY TOTALS		**0**	**599**	**171**	**0**	**0**	**770**	**1,230**	**0**	**313**	**1,543**
SERVICE ENERGY-DOVER											
BENZENE (1)	71-43-2	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0	0	0	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0	0	0	0	0	0	0
METHYL TERT-BUTYL ETHER (1)	1634-04-4	0	0	0	0	0	0	0	0	0	0
TOLUENE (1)	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS) (1)	1330-20-7	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SERVICE ENERGY-MILFORD											
TOLUENE (1)	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SICO											
BENZENE (1)	71-43-2	0	0	0	0	0	0	0	0	0	0
CYCLOHEXANE (1)	110-82-7	0	0	0	0	0	0	0	0	0	0
ETHYLBENZENE (1)	100-41-4	0	0	0	0	0	0	0	0	0	0
N-HEXANE (1)	110-54-3	0	0	0	0	0	0	0	0	0	0
METHYL TERT-BUTYL ETHER	1634-04-4	0	0	0	0	0	0	0	0	0	0
NAPHTHALENE	91-20-3	0	0	0	0	105	105	0	0	0	0
TOLUENE	108-88-3	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE (1)	95-63-6	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS)	1330-20-7	0	0	0	0	105	105	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**210**	**210**	**0**	**0**	**0**	**0**
SPATZ FIBERGLASS											
STYRENE	100-42-5	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SPI POLYOLS											
NICKEL	7440-02-0	22,839	0	0	0	57,979	80,818	0	0	42,000	42,000
NITRIC ACID	7697-37-2	0	0	1,000	0	0	1,000	0	0	0	0
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**22,839**	**0**	**1,000**	**0**	**57,979**	**81,818**	**0**	**0**	**42,000**	**42,000**
SUNOCO MARCUS HOOK REFINERY											

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX F - 1998 DELAWARE TRI OFF-SITE TRANSFERS & WASTES MANAGED ON-SITE BY FACILITY

(in pounds)

		OFF-SITE TRANSFERS						ON-SITE WASTE MANAGEMENT			
	CAS NO.	DISPOSAL	POTW	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL	TREAT-MENT	ENERGY RECOVERY	RE-CYCLE	TOTAL
ETHYLENE	74-85-1	0	0	0	0	0	0	0	0	0	0
ETHYLENE OXIDE	75-21-8	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOWNSENDS											
AMMONIA	7664-41-7	0	0	0	0	0	0	0	0	0	0
ATRAZINE	1912-24-9	0	0	0	0	0	0	0	0	0	0
COPPER COMPOUNDS (1)	N100	0	0	0	0	0	0	0	0	0	0
DIMETHOATE	60-51-5	0	0	0	0	0	0	0	0	0	0
ETHYLENE GLYCOL	107-21-1	0	0	0	0	0	0	0	0	0	0
N-HEXANE	110-54-3	0	0	0	0	0	0	0	0	0	0
MANGANESE (1)	7439-96-5	0	0	0	0	0	0	0	0	0	0
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0	0	0	0	0	0	0
PHOSPHORUS (YELLOW OR WHITE)	7723-14-0	0	0	0	0	0	0	0	0	0	0
ZINC (FUME OR DUST) (1)	7440-66-6	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
UNIQEMA											
BIS(2-CHLOROETHYL) ETHER	111-44-4	0	8,965	0	0	1,578	10,543	0	0	0	0
ETHYLENE OXIDE	75-21-8	0	0	0	0	0	0	0	0	0	0
GLYCOL ETHERS	N230	0	6,427	0	0	0	6,427	2,755	0	0	2,755
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	0	1,934	0	0	0	1,934	0	0	0	0
NAPHTHALENE	91-20-3	0	701	0	0	0	701	300	0	0	300
PHENOL	108-95-2	0	610	0	0	0	610	262	0	0	262
PHOSPHORIC ACID (1)	7664-38-2	0	0	0	0	0	0	0	0	0	0
PROPYLENE OXIDE	75-56-9	0	0	0	0	0	0	0	0	0	0
FACILITY TOTALS		**0**	**18,637**	**0**	**0**	**1,578**	**20,215**	**3,317**	**0**	**0**	**3,317**
WILMINGTON LEATHER COATINGS											
DIISOCYANATES (1)	N120	0	0	0	0	0	0	0	0	0	0
N-METHYL-2-PYRROLIDONE	872-50-4	0	0	283	6,566	0	6,849	0	0	0	0
FACILITY TOTALS		**0**	**0**	**283**	**6,566**	**0**	**6,849**	**0**	**0**	**0**	**0**
ZENECA SPECIALTIES											
CHLOROMETHANE	74-87-3	0	203	0	0	0	203	0	0	0	0
COPPER COMPOUNDS	N100	194	142	0	0	0	336	0	0	0	0
ETHYLENE GLYCOL	107-21-1	0	28,204	0	0	0	28,204	0	0	0	0
FORMIC ACID	64-18-6	75,234	131	0	0	0	75,365	0	0	0	0
GLYCOL ETHERS	N230	0	815	0	272	0	1,087	0	0	0	0
METHANOL	67-56-1	0	53,995	0	105,197	0	159,192	0	0	0	0
TOLUENE	108-88-3	0	26	0	17,360	0	17,386	0	0	0	0
FACILITY TOTALS		**75,428**	**83,516**	**0**	**122,829**	**0**	**281,773**	**0**	**0**	**0**	**0**
STATEWIDE TOTALS		**422,812**	**3,333,176**	**632,419**	**1,489,982**	**11,981,296**	**17,859,685**	**67,697,327**	**16,155,665**	**34,449,050**	**118,302,042**

(1) Submitted Form A for this chemical, which does not include waste amounts.

(2) Identified in the TRI list of chemicals as: 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride

Source: DNREC 1998 TRI Database 11/99

APPENDIX G - SUMMARY OF FACILITIES - RANKED BY 1998 ON-SITE RELEASES
(in pounds)

		1998 DATA			1997 DATA			1997 TO 1998		
RANK	FACILITY	FORM Rs	FORM As	TOTAL RELEASES	FORM Rs	FORM As	TOTAL RELEASES	INCREASE/ DECREASE	PERCENT CHANGE	ADJUSTED CHANGE (1)
1	DELMARVA POWER INDIAN RIVER	11	0	3,934,099	0	0	NA	NA	NA	NA
2	DELMARVA POWER EDGE MOOR	10	3	2,026,816	0	0	NA	NA	NA	NA
3	MOTIVA ENTERPRISES	28	3	1,919,578	31	2	572,063	+1,347,515	+236%	+238%
4	FIRST STATE POWER MANAGEMENT	3	0	1,508,037	0	0	NA	NA	NA	NA
5	DUPONT SEAFORD	6	0	1,043,900	7	0	1,090,812	-46,912	-4%	-3%
6	DAIMLERCHRYSLER	19	1	441,994	10	3	125,507	+316,487	+252%	-37%
7	GENERAL MOTORS	14	0	421,327	12	0	420,037	+1,290	0	+8%
8	TOWNSENDS	6	4	339,153	4	3	536,895	-197,742	-37%	-44%
9	DUPONT EDGE MOOR	6	0	305,072	6	0	236,698	+68,374	+29%	+30%
10	FORMOSA PLASTICS	3	0	131,977	3	0	136,842	-4,865	-4%	-2%
11	METACHEM PRODUCTS	8	0	98,621	8	0	107,642	-9,021	-8%	+16%
12	RODEL	3	1	91,850	5	1	149,138	-57,288	-38%	-16%
13	CIBA SPECIALTY CHEMICALS	6	0	70,101	7	0	76,455	-6,354	-8%	-20%
14	NANTICOKE HOMES	4	0	53,896	3	0	24,919	+28,977	+116%	+45%
15	REICHHOLD	12	0	51,676	11	0	46,066	+5,610	+12%	+14%
16	AIR LIQUIDE AMERICA	1	0	33,420	1	0	27,300	+6,120	+22%	0%
17	GENERAL CHEMICAL	4	0	31,821	4	0	30,450	+1,371	+5%	+8%
18	SUNOCO MARCUS HOOK REFINERY	2	0	31,170	2	0	45,300	-14,130	-31%	-32%
19	HIRSH INDUSTRIES	3	0	29,203	2	0	29,000	+203	+1%	-32%
20	MACDERMID	3	0	27,969	3	0	28,960	-991	-3%	-5%
21	HANOVER FOODS	1	0	27,103	1	0	31,080	-3,977	-13%	+3%
22	ALLIEDSIGNAL	5	1	26,500	5	1	28,230	-1,730	-6%	+3%
23	KANEKA	2	0	24,082	3	0	38,301	-14,219	-37%	-20%
24	MFG JUSTIN TANKS	1	0	18,500	1	0	19,400	-900	-5%	-3%
25	NVF YORKLYN	1	0	18,250	1	0	22,703	-4,453	-20%	-23%
26	MEDAL	3	0	14,800	3	0	34,400	-19,600	-57%	-52%
27	UNIQEMA	7	1	13,725	6	2	12,756	+969	+8%	+7%
28	PERDUE GEORGETOWN	2	0	12,150	0	0	NR	+12,150	NA	NA
29	AMERICAN MINERALS	4	0	11,963	0	0	NA	NA	NA	NA
30	AGRILINK FOODS	1	0	9,889	1	0	12,862	-2,973	-23%	-27%
31	NORAMCO	8	0	9,610	8	0	6,482	+3,128	+48%	+66%
32	KRAFT FOODS	2	0	8,471	2	0	21,104	-12,633	-60%	-43%
33	D&B INDUSTRIAL GROUP	1	0	7,000	0	0	NR	+7,000	NA	NA
34	HEWLETT-PACKARD	1	0	6,226	1	0	6,170	+56	+1%	+7%
35	CITISTEEL USA	6	1	6,185	6	1	29,069	-22,884	-79%	-79%
36	CAMDEL METALS	3	0	5,730	3	0	4,420	+1,310	+30%	+20%
37	OCCIDENTAL CHEMICAL	4	0	5,002	4	0	4,817	+185	+4%	+7%
38	ZENECA SPECIALTIES	7	0	4,929	9	0	3,842	+1,087	+28%	-6%
39	SPATZ FIBERGLASS	1	0	4,799	1	0	5,263	-464	-9%	0%
40	ARLON	1	0	3,800	1	0	3,900	-100	-3%	+6%

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ND - no data, Form As only; NR - no reports; NA - not applicable
Source: DNREC TRI Database 11/99

APPENDIX G - SUMMARY OF FACILITIES - RANKED BY 1998 ON-SITE RELEASES
(in pounds)

		1998 DATA			1997 DATA			1997 TO 1998		
RANK	FACILITY	FORM Rs	FORM As	TOTAL RELEASES	FORM Rs	FORM As	TOTAL RELEASES	INCREASE/ DECREASE	PERCENT CHANGE	ADJUSTED CHANGE (1)
41	RITE-OFF	4	2	3,561	4	2	1,897	+1,664	+88%	+77%
42	ORIENT	3	0	3,075	3	0	3,488	-413	-12%	+5%
43	SICO	4	5	2,100	0	0	NA	NA	NA	NA
44	MARBLE WORKS	1	0	1,967	1	0	2,027	-60	-3%	0%
45	S.C. JOHNSON POLYMER	3	3	1,662	3	3	1,469	+193	+13%	-8%
46	RODEL TECHNICAL CENTER	2	0	1,026	1	1	839	+187	+22%	+12%
47	DUPONT HOLLY RUN	1	0	824	1	0	799	+25	+3%	0%
48	SPI POLYOLS	2	1	698	2	1	535	+163	+30%	+29%
49	DENTSPLY/CAULK MAIN	2	0	545	2	0	386	+159	+41%	0%
50	ALLOY SURFACES	2	0	461	2	0	705	-244	-35%	-22%
51	JOHNSON CONTROLS	2	0	297	2	0	263	+34	+13%	-3%
52	HERCULES RESEARCH CENTER	2	0	287	3	0	426	-139	-33%	-48%
53	PRINTPACK	1	0	252	1	0	260	-8	-3%	-5%
54	INSTEEL WIRE PRODUCTS	1	0	112	1	0	0	+112	NA	NA
55	DENTSPLY/CAULK WEST	2	0	94	2	0	159	-65	-41%	0%
56	PPG ARCHITECTURAL FINISHES	2	2	73	2	2	70	+3	+4%	-11%
57	PLAYTEX PRODUCTS	2	0	44	2	0	46	-2	-4%	0%
58	E-A-R SPECIALTY COMPOSITES	2	0	40	2	0	40	0	0%	+2%
59	WILMINGTON LEATHER COATINGS	1	1	30	0	0	NR	+30	NA	NA
60	FLAIR-NEW CASTLE	2	0	20	2	0	52	-32	-62%	+2%
61	PERDUE MILFORD	1	0	10	0	0	NR	+10	NA	NA
62	CHLORAMONE	1	0	9	1	0	10	-1	-10%	-100%
63	AMETEK-HAVEG DIVISION	1	1	5	1	1	38	-33	-87%	-84%
64	BRANDYWINE COMPOUNDING	3	0	0	2	0	0	0	0%	0%
64	CHROME DEPOSIT	1	0	0	2	0	0	0	0%	0%
64	PERMA-FLEX	1	0	0	2	0	15,550	-15,550	-100%	0%
64	PLAYTEX APPAREL	1	0	0	1	0	0	0	0%	0%
64	ALLEN PETROLEUM	0	8	ND	0	0	NA	NA	NA	NA
64	ALLEN'S MILLING	0	3	ND	0	3	ND	NA	NA	NA
64	BARCROFT	0	2	ND	0	2	ND	NA	NA	NA
64	CARL KING	0	8	ND	0	0	NA	NA	NA	NA
64	GAC SEAFORD	0	1	ND	0	1	ND	NA	NA	NA
64	MOUNTAIRE FARMS FEEDMILL	0	3	ND	0	1	ND	NA	NA	NA
64	PENINSULA OIL-BLADES	0	7	ND	0	0	NA	NA	NA	NA
64	PEPSI-COLA BOTTLING	0	1	ND	0	2	ND	NA	NA	NA
64	PERDUE BRIDGEVILLE	0	3	ND	0	3	ND	NA	NA	NA
64	ROLLER SERVICE	0	1	ND	1	0	0	NA	NA	NA
64	SERVICE ENERGY-DOVER	0	7	ND	0	0	NA	NA	NA	NA
64	SERVICE ENERGY-MILFORD	0	2	ND	0	0	NA	NA	NA	NA

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