

**DELAWARE
TOXICS
RELEASE
INVENTORY
DATA SUMMARY**



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Prepared by the
Department of Natural Resources and Environmental Control
March 2007

2005 TRI DATA SUMMARY

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Front Cover: Crushed automobiles are a major source of recycled steel. However, automobiles may contain mercury in switches and other devices. If these switches are not removed, the mercury may be released to the environment during the steel refining process. DNREC is working with the steel recycling industry to promote mercury switch removal.

A MESSAGE FROM THE SECRETARY

The Department of Natural Resources and Environmental Control is pleased to present the Toxics Release Inventory (TRI) Report for the reporting year 2005. In Delaware, TRI reports for 2005 show that on-site releases reported under TRI were lower by 18% when compared to 2004, and they were lower by 29% compared to 1998. One reason for the decrease in reported on-site release amounts is that the Indian River Power Plant had fewer impurities, including chlorine, in the coal it burned in 2005. Fuel quality, as well as amount of energy production, can affect the environment. We encourage both industry and the public to do their share to help preserve the environment through greater energy efficiency and material selection.

In estimating amounts for their 2005 reports, some facilities changed to more accurate methods of estimating amounts. With increasing emphasis on mercury and mercury compounds, DNREC had requested a significant reporter of these compounds, Claymont Steel, to conduct additional tests to verify their release estimates. As a result of the tests, mercury compounds and some other releases were found to be higher than originally estimated. Additional tests have been ordered, and I have also issued an order for Claymont Steel to reduce its mercury emissions by 90% by the end of 2008. DNREC is also working with the steel recycling industry to reduce mercury contained in scrap steel, and with the power industry to reduce mercury compound releases to the air. Other DNREC initiatives to reduce mercury emissions are described in our Air and Waste Management Division site at: <http://www.awm.delaware.gov/Info/MercuryInit.htm>. In sum, Delaware's 2005 TRI data shows that reporting accuracy is up, while the total long-term trend in TRI on-site releases is down.

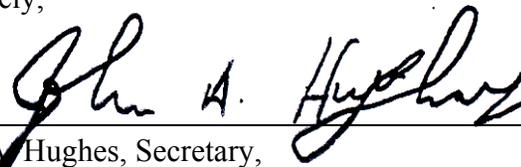
While there is positive news within the TRI data, there is also some negative news within the program. Recently, the EPA weakened the TRI program by enacting a rule allowing more facilities to report on the TRI short Form A that does not report

any amounts. A copy of our letter to the EPA opposing the proposed rule change, similar to the final rule which was enacted, can be found in Appendix M of the 2004 and 2005 TRI Data Detail Reports at: <http://www.serc.delaware.gov/reports.shtml>.

We publish two TRI reports annually. This summary report was developed in response to requests for a more compact, less technical report. The more technical TRI Data Detail Report, this Data Summary Report, and reports for recent years are available at DNREC offices and also through the public information link at <http://www.serc.delaware.gov/epcra.shtml>. Specific facility data from 1995-2005 are also available at the above web site in an easy-to-use searchable format, and the *Other Sources of Information* section of this report provides details about the many other DNREC and EPA Internet sites devoted to community right-to-know.

DNREC publishes this report to inform citizens about the environment in their communities. Even though TRI does not mandate reductions of toxic chemical releases or issue permits for chemical releases, the public visibility of TRI reporting has motivated companies to significantly reduce their emissions. I urge you to take advantage of the information in this report to learn about the management of chemicals in your community. I also encourage our industrial citizens to continue to reduce releases below today's levels and focus on providing a safer and more healthful environment for our future.

Sincerely,



John A. Hughes, Secretary,
Department of Natural Resources and Environmental Control

INTRODUCTION

This report reflects the third phase of environmental management since the industrial revolution began several decades ago.



First, chemicals became more diverse and widespread in our communities, especially during the last 60 years. Second, society and government responded to concerns with traditional regulations designed to control the potential harm to communities, human health, and the environment by chemicals. Third, in response to recognition by industries and communities that traditional regulation was not as effective as desired, a fundamental “Right to Know” has emerged in work places and in the broader community.

Recognition of the value of information and the power that the public and employees can apply through the use of public and worker right to know has led to a series of laws requiring simple reporting of the use and release of hazardous substances.

For example, Philadelphia enacted the nation’s first “Right to Know” law in 1981. In 1986, Congress created the Toxics Release Inventory (TRI) as part of the Superfund Amendments and Reauthorization Act (SARA) to ensure that toxic chemicals are managed and used safely and responsibly by the manufacturing industries and other facilities. Delaware and DNREC support this program, and collect and distribute TRI data to the public each year.

The fact that companies must report on the amount of toxic chemicals they release into the environment has, by itself, caused significant reductions in TRI environmental releases over the years. The downward trend for on-site TRI chemical releases resumed in 2005 after an increase in 2004. Although some on-site releases increased in 2005, they were more than offset by significant decreases in

reports from other facilities, causing the total amount of state-wide on-site releases to decrease in 2005. We hope that, with the help of industry and interested citizens, reductions in the amounts of on-site releases of TRI chemicals will continue.

This year’s report focuses in part on the releases of the persistent, bioaccumulative and toxic chemicals known as PBT’s, because this is only the sixth year that these chemicals have been reported at lower thresholds.

The Department of Natural Resources and Environmental Control (DNREC) hopes that the information presented in this report will benefit Delaware citizens by improving their awareness and promoting their involvement in environmental issues in their communities.

This report provides a summary of the toxic chemicals handled by Delaware facilities in 2005 and associated data reported to the TRI program. DNREC also publishes a second, more detailed TRI report that provides information about each TRI chemical reported by each facility.

WHAT IS THE TOXICS RELEASE INVENTORY?

The **Toxics Release Inventory**, or **TRI**, is a collection of data that contains information about toxic chemicals that are manufactured or used by some, but definitely not all, facilities in the United States. See page 4 for details on who must report to the TRI program. This information is reported each year by the facilities to the states where they are located, and to the U.S. Environmental Protection Agency (EPA). This information is available to the public through this report and a more technical report published by Delaware's Department of Natural Resources and Environmental Control (DNREC). In addition, the EPA publishes TRI reports, and the data is available through state and federal internet sites. The TRI program was established in 1986 to provide information to the public about the presence and release of toxic chemicals in their communities. It is part of the Emergency Planning and Community Right-to-Know Act (EPCRA).

The EPCRA Reporting Program maintains a database that is updated as new reports are received. The database currently contains nineteen years of data. Most chemical releases reported under TRI are also regulated through Federal and/or State permits.

This report provides a summary of the 2005 TRI data and revisions received as of December 1, 2006 from Delaware facilities.

WHY IS THERE A NEED FOR THIS PROGRAM?

A dramatic and fatal accident involving the release of a large quantity of methyl isocyanate gas occurred in Bhopal, India on December 3, 1984. Because of this release and similar, less tragic, accidents that occurred in the United States, Congress enacted the Emergency Planning and Community Right to Know Act (EPCRA). The purpose of this Act is to give citizens information about the chemicals present in their communities, and improve the ability

of facilities and local emergency agencies to plan for and respond to chemical emergencies. The Act established a number of reporting requirements for facilities and businesses, and reporting began in 1987. In 1991, Delaware established its own EPCRA legislation that enhanced the federal requirements.

WHAT IS A TOXIC CHEMICAL?

A toxic chemical is one that meets any of several standards for serious or significant potential to harm human, fish, or animal life, or to be harmful to the environment. There are now 581 chemicals and an additional 30 chemical categories, such as mercury compounds, polycyclic aromatic compounds (PAC's), and Dioxin and Dioxin-like compounds, on the TRI chemical list. Of these chemicals and compounds, about 103 are currently reported in Delaware.

WHO MUST REPORT TO THE TRI PROGRAM?

Not every facility in Delaware reports to the TRI program. There are three requirements a facility must meet before reporting is required.

1. Only facilities that have 10 or more full time employees are required to report.



2. A facility must be doing business as a manufacturer or processor, generate electric power, or distribute bulk petroleum products. All federal facilities are also required to report.
3. A facility must manufacture or process one of the chemicals on the TRI list in quantities greater

than a minimum threshold value. This value is generally 25,000 pounds for Manufacturing and Processing, and 10,000 pounds for the Otherwise Use category. There are lower threshold values for chemicals known as Persistent, Bioaccumulative Toxins (PBT's). Some facilities are able to report some chemicals on a short form (Form A) if the reportable amount of that chemical meets certain criteria. No amounts are reported on Form A, but the facility indicates that it manufactured, processed, or otherwise used less than the threshold amount of the chemical during the year.

HOW DO WE GET THE DATA?

Each year by July 1, facilities report on each chemical that meets the reporting threshold. Each chemical report is usually on a 5-page form that details the type and amount of on-site release, off-site transfer, or on-site waste management activity

the chemical has experienced during the prior calendar year. The facilities report this data to DNREC and to the EPA.



DNREC and EPA check the data for completeness and accuracy, including comparing it with data reported to other programs.

DNREC also visits some of the facilities to get a better understanding about the process at the facility and the reasons for specific chemical use. In addition, DNREC and EPA may audit a facility if they suspect that reporting was not accurate. Both DNREC and the EPA publish reports on the data. The reports, such as this one, are available to the public.

TYPES OF TRI DATA

TRI chemical data is reported in several categories. Table 1 on the next page lists all the categories and amounts reported in 2005 to Delaware and EPA under the TRI program.



On-Site Releases: On-site releases in Delaware are to **air, water, or land**. The **air** release category includes exhaust air collected by vents, ducts, or pipes, as well as air escaping into the general facility atmosphere. **Water** releases are to streams or water bodies, including rivers, lakes, oceans and bays at the facility site. This includes

releases from sources such as industrial process outflow or open trenches and storm water runoff. **Land** releases go to landfills, hazardous waste landfills, surface impoundments (uncovered holding areas used to evaporate and/or settle waste materials), other land disposal such as waste piles or releases, and land application or treatment in which waste containing a TRI chemical is applied to or incorporated into soil or land at the facility.



Off-Site Transfers: Off-site transfers include transfer of chemical waste to **POTW's**

(Publicly Owned Wastewater Treatment Plants), to **recycle** operations, to **energy recovery** operations, to **treatment** operations, and to **disposal**. These transfers are to other facilities that are permitted to accept the waste from the facility that generates it.



On-site waste Management: Waste management operations at the facility generating the waste include **recycling, energy recovery, and treatment**. These are the same as described above in Off-Site Transfers, but occur on-site.

2005 DATA SUMMARY

Table 1 shows statewide totals of 2005 TRI on-site releases, off-site transfers, and wastes managed on-site. These different categories are discussed in the previous section and below.



Seventy-two facilities submitted 346 reports on 103 different chemicals. As in past years, air releases constitute the largest portion of the total on-site releases. On-site releases of all TRI chemicals were lower by 18% compared to 2004, primarily because one electricity generating facility had fewer impurities in the coal that it burned to generate electricity. This, and

TABLE 1
2005 TRI DATA SUMMARY
(IN POUNDS)

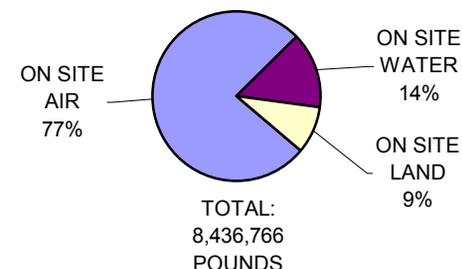
	2005
No. of facilities	72
No of Form A's	53
No of Form R's	293
No. of Chemicals	103
On-site Releases	
Air	6,472,074
Water	1,211,798
Land	752,894
Total Releases	8,436,766
Off-site Transfers	
POTW's	1,514,246
Recycle	11,259,408
Energy Recovery	2,709,850
Treatment	199,493
Disposal	4,400,539
Total Transfers	20,083,537
On-site Waste Mgmt.	
Recycle	10,079,028
Energy Recovery	19,786,104
Treatment	38,176,991
Total on-site Mgmt.	68,042,123
Total Waste	96,562,426

decreases reported by other facilities, more than accounted for some smaller increases in other reports.

ON-SITE RELEASES

On-site releases are emissions to the air, water, or land environment at the facility site. Figure 1 shows the amounts of all TRI chemicals released on-site for all Delaware TRI facilities.

FIGURE 1
2005 ON SITE RELEASES



Of all the TRI chemicals released to air, hydrochloric acid and sulfuric acid make up about 76% of the total releases to air. These acid gasses are almost entirely generated by the power plants at Indian River, Edge Moor/Hay Road, INVISTA, and the Premcor refinery. These same

chemicals make up about 58% of the total on-site releases to air, water, and land combined.

On-site releases to water consist mostly of nitrate compounds from the INVISTA Seaford, Perdue Georgetown and Premcor facilities. Although these facilities are large producers of nitrate compounds, there are several other nitrate-producing facilities in Delaware that are not subject to the TRI program.



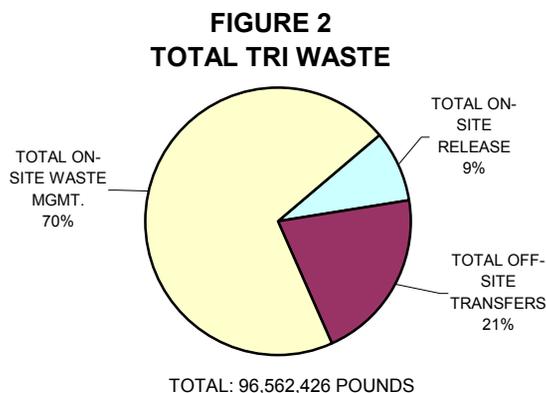
Releases to land on-site are almost all metallic compounds such as barium, vanadium, lead, nickel, manganese, chromium, copper, and zinc compounds. The power plants at Indian River, Edge Moor, INVISTA, and at the Motiva/Premcor refinery generate these metallic compounds in ash from

impurities in the fuels that they burn.

TOTAL WASTE

The relative amounts of all TRI chemical wastes from the three main categories in Table 1 are shown in Figure 2, where you can see the percentage contribution of the on-site releases, off-site transfers, and on-site waste management.

Table 1 and Figure 2 show that on-site releases make up only



about 11% of the total waste reported to the TRI program. Other data, including transfers off-site and waste managed on-site are discussed in more detail in

the 2005 TRI Data Detail Report available from DNREC.

LIMITATIONS OF TRI DATA

In addition to the fact that not all facilities are required to report to the TRI program, there is an important thing to keep in mind:

THIS DATA DOES NOT INDICATE THE AMOUNT, IF ANY, OF HUMAN EXPOSURE OR HOW SEVERE IT MIGHT BE.

TRI data does not provide an indication of actual or potential exposure to the reported releases and cannot be used by itself to determine the impact on your health. Factors such as the chemical's release rate, the toxicity of the chemical, where the chemical enters the environment and its proximity to nearby communities must be fully considered when assessing exposure to the chemical. A small release of a highly toxic chemical near a large community may be a greater risk than a large release of a less toxic chemical in a remote area.

WHAT IS A PERSISTENT, BIOACCUMULATIVE TOXIC CHEMICAL?

Certain chemicals are more toxic to humans, animals, and the environment than others, and some remain in the environment much longer than others before they are destroyed by natural processes (if they are destroyed at all). In addition, some chemicals tend to accumulate in bodies of humans, fish, and animals rather than being

destroyed or eliminated. These chemicals, if they meet certain standards, are classified as Persistent, Bioaccumulative Toxic (PBT) chemicals. Metals, as elements, are neither created nor destroyed. They can, however, change form in nature or industry as they combine with other elements to become chemicals or compounds that may be classified as PBT's.

If these PBT chemicals are manufactured, processed, or otherwise used above the reporting threshold amounts shown in Table 2, they are reportable to the TRI program. Because of the increased hazards associated with these substances, their thresholds for reporting to TRI are much lower than the basic thresholds applied to other, non-PBT substances. The total amounts released on-site for these PBT substances are shown in Table 3 on the next page.



**TABLE 2
PBT CHEMICALS AND
REPORTING THRESHOLDS
(pounds/year)**

Chemical or Chemical Category	Threshold (Pounds)
Aldrin	100
Benzo[g,h,i]perylene	10
Chlorodane	10
Dioxin and dioxin-like compounds	0.1 grams
Heptachlor	10
Hexachlorobenzene	10
Isodrin	10
Lead *	100
Lead and lead compounds *	100
Mercury	10
Mercury compounds	10
Methoxychlor	100
Octachlorostyrene	10
Pendimethalin	100
Pentachlorobenzene	10
Polychlorinated biphenyls (PCB's)	10
Polycyclic aromatic compounds	100
Tetrabromobisphenol A	100
Toxaphene	10
Trifluralin	100

* Lower Threshold Starting With 2001 Reports

DATA FOR PERSISTENT BIOACCUMULATIVE TOXICS

In 2000, the EPA required reporting at much lower threshold levels on a class of chemicals known as persistent, bioaccumulative, toxics (PBT's). Table 2 on page 8 shows



the new thresholds. In 2001, lead and lead compounds, already on the TRI chemical list, were added to the PBT list, and their reporting thresholds were reduced. PBT's are receiving increased attention because we are learning that they remain in the environment for a long time and may not be readily

destroyed by nature. PBT's may also move up the food chain without being destroyed and accumulate in body tissues. Table 3 shows the reported on-site release amounts for PBT's for 2001-2005. The PBT chemicals made up a small part, about 0.39%, of the total on-site releases for 2005. Although PBT's were reportable in 2000, the addition of lead compounds and lead in 2001 greatly increased (by over 27,000 pounds) the total amount of PBT's that were reportable that year. The 2001-

2005 data reported here includes lead compounds and lead reported on a consistent basis. The 2005 reported on-site releases of PBT's are 1% higher compared to 2004 because Claymont Steel reported higher mercury compounds and the Premcor refinery reported higher polycyclic aromatic compounds. The PBT's reported in 2005 are 4% more than the amounts reported in 2001.

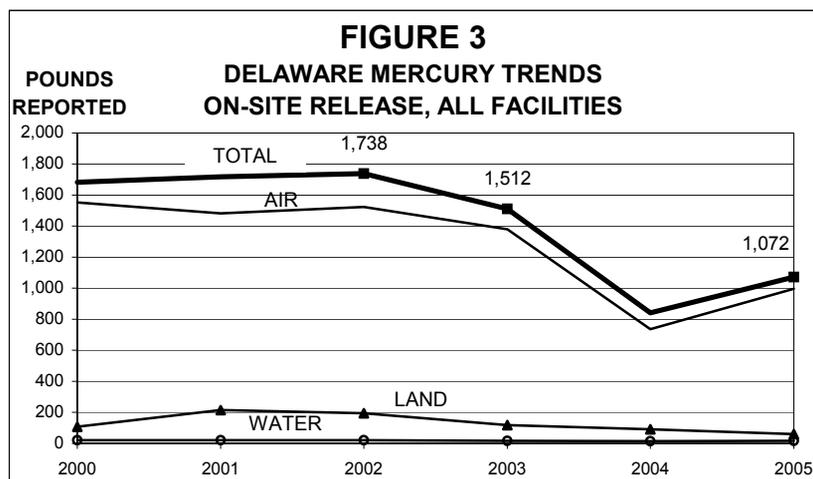
TABLE 3
2001-2005 TRI PBT DATA SUMMARY
(IN POUNDS)

	2001	2002	2003	2004	2005
No. of facilities	23	32	28	26	28
No. of Form R's	51	65	62	60	61
No. of Chemicals	12	11	11	11	11
On-site Releases					
Air	5,681	5,282	5,230	3,797	4,095
Water	3,659	784	311	1,002	1,857
Land	21,852	17,166	21,826	27,356	26,559
Total Releases	31,192	23,232	27,367	32,154	32,510

Source: DNREC 2005 TRI Database, 12-1-06

Mercury and Mercury Compounds

Mercury (elemental mercury) and mercury compounds are an important part of the PBT category, and this section discusses some of the data in these reports. Reported elemental mercury on-site release amounts were unchanged as Occidental Chemical completes its chlor-alkali plant shutdown. Occidental Chemical sent about 383,000 pounds of mercury off-site for recycling as part of this shutdown activity. Occidental contributed virtually all the 278 pounds of elemental mercury released on-site, but this amount will substantially decrease as the facility completes its shutdown. DNREC has requested verification of Occidental mercury release amounts, as we suspect that the reported amounts may not be as accurate as available technology can provide. Results of this verification will be reported on in the 2006 TRI reports. Figure 3 shows the combined trend for mercury and mercury compounds.



Reported on-site releases of mercury compounds in Delaware increased 231 pounds (41%) due to an increase in the report from the Claymont Steel facility. This facility changed its method of estimating releases from emission factors to stack tests in 2006. Despite this increase in reported mercury release from Claymont steel, overall total mercury releases in Delaware decreased by 29% in 2005 compared to the 2003 reported amount of 1,512 pounds, and decreased 38% since the peak of 1,738 pounds in 2002.

FIGURE 4
DELAWARE FACILITIES
2005 ON-SITE MERCURY RELEASES

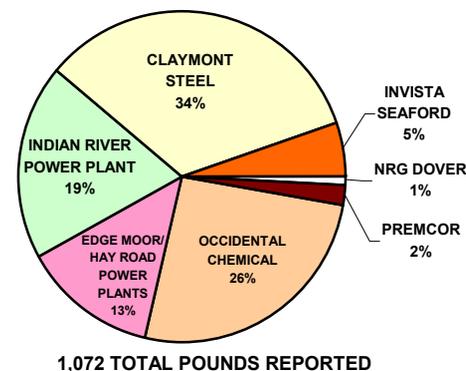


Figure 4 shows the percentage each of the facilities that reported a mercury or mercury compound on-site release contributed to the mercury total in 2005.

WHAT IS A CARCINOGENIC CHEMICAL?



Some chemicals are known to or suspected to cause cancer in humans. These chemicals are called carcinogens. Table 4 shows the chemicals on the TRI list that are identified as carcinogens and were reported in Delaware for 2005. Table 4 also shows the number of reports that were received by the TRI program in Delaware for each of these chemicals.

DATA FOR CARCINOGENIC CHEMICALS

Table 5 shows data for carcinogens reported to TRI in Delaware since 1999. Additional detail on carcinogens can be found in the longer, more technical *2005 TRI Data Detail Report* available from DNREC.

TABLE 5
1999-2005 CARCINOGENS
ON-SITE RELEASES IN POUNDS

	1999	2000	2001	2002	2003	2004	2005
AIR	545,769	401,192	345,472	402,350	245,676	221,262	224,135
WATER	3,338	4,666	13,987	11,791	10,773	12,129	8,062
LAND	306,772	258,048	190,804	187,549	334,290	222,680	178,694
TOTAL ON-SITE	855,879	663,906	550,263	601,690	590,739	456,071	410,890

TABLE 4
CARCINOGENS REPORTED BY
DELAWARE FACILITIES FOR 2005

CHEMICAL NAME	NO. OF REPORTS
1,3-BUTADIENE	2
1,3-DICHLOROPROPYLENE	1
4,4'-METHYLENEBIS(2-CHLOROANILINE)	1
ACROLONITRILE	1
ARSENIC	1
ARSENIC COMPOUNDS	2
BENZENE	6
BUTYL ACRYLATE	2
CHROMIUM COMPOUNDS	10
COBALT COMPOUNDS	3
DICHLOROMETHANE	1
DIETHYL SULFATE	1
ETHYL ACRYLATE	2
ETHYLBENZENE	4
ETHYLENE OXIDE	1
FORMALDEHYDE	1
HEXACHLOROENZENE	1
LEAD	4
LEAD COMPOUNDS	14
NAPHTHALENE	6
NICKEL	3
NICKEL COMPOUNDS	6
NITROBENZENE	1
P-CHLOROANILINE	1
POLYCHLORINATED BIPHENYLS	1
POLYCYCLIC AROMATIC COMPOUNDS	13
PROPYLENE OXIDE	1
STYRENE	6
TETRACHLOROETHYLENE	1
TOLUENE DIISOCYANATE (MIXED ISOMERS)	2
TRICHLOROETHYLENE	1
VINYL ACETATE	2
VINYL CHLORIDE	1
TOTAL =	103

Source: 2005 DNREC Database, December 1, 2006

FIGURE 5

ON-SITE RELEASES BY COUNTY



NEW CASTLE

Air Releases = 2,910,710 Pounds
Water Releases = 511,478 Pounds
Land Releases = 733 Pounds
Total On-Site Releases = 3,422,921 Pounds
213 Reports , 36 Facilities
41% of Statewide Releases

KENT

Air Releases = 104,141 Pounds
Water Releases = 0 Pounds
Land Releases = 0 Pounds
Total On-Site Releases = 104,141 Pounds
50 Reports, 15 Facilities
1% of Statewide Releases

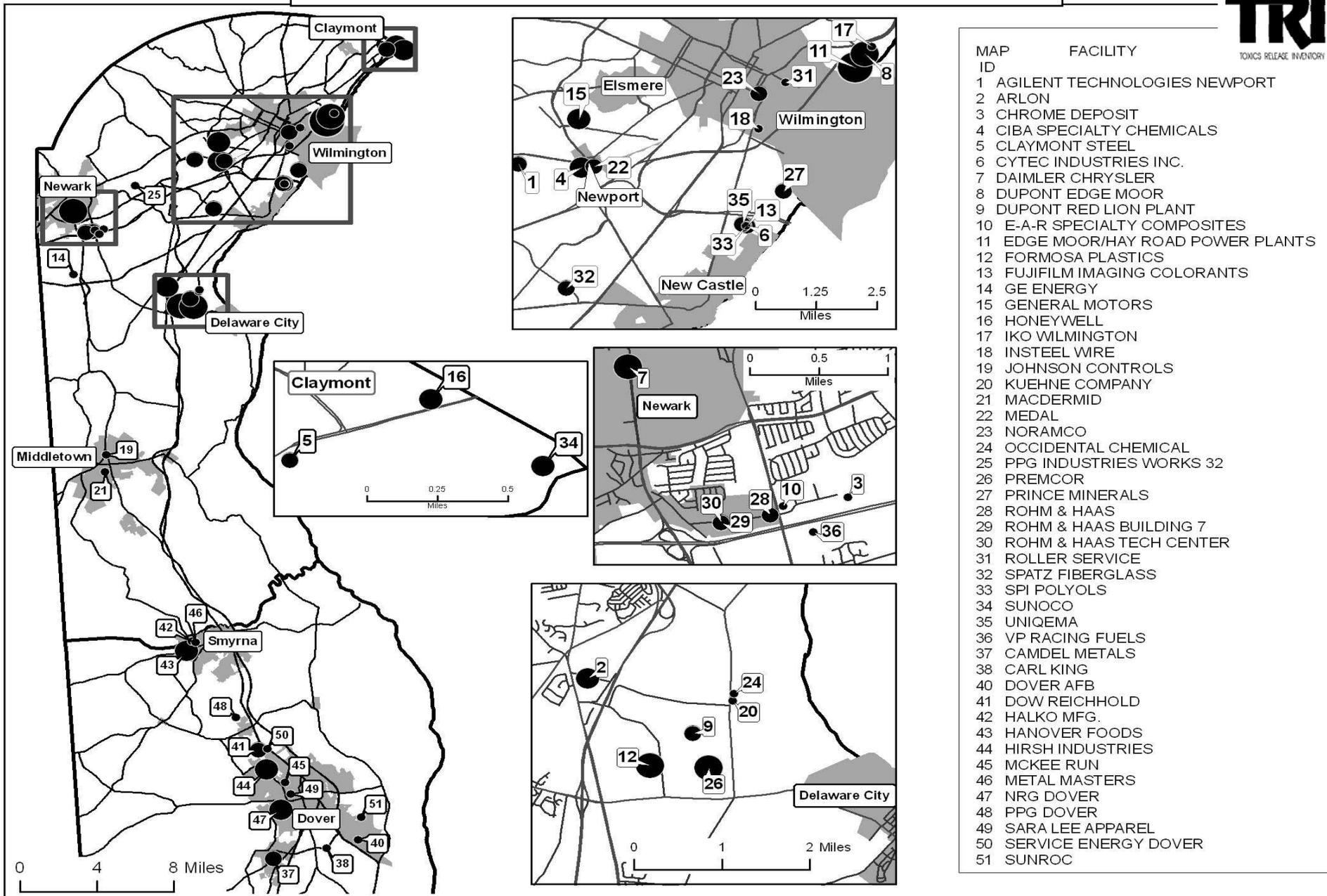
SUSSEX

Air Releases = 3,457,223 Pounds
Water Releases =700,320 Pounds
Land Releases = 752,161 Pounds
Total On-Site Releases = 4,909,704 Pounds
83 Reports, 21 Facilities
58% of Statewide Releases

Figure 3 on this page summarizes data about the TRI releases in 2005 for each county, and the maps and indexes on the next 2 pages show where TRI facilities are located.

Source: DNREC TRI Database 12-1-06

FIGURE 6 - TRI FACILITY LOCATOR MAP 2005



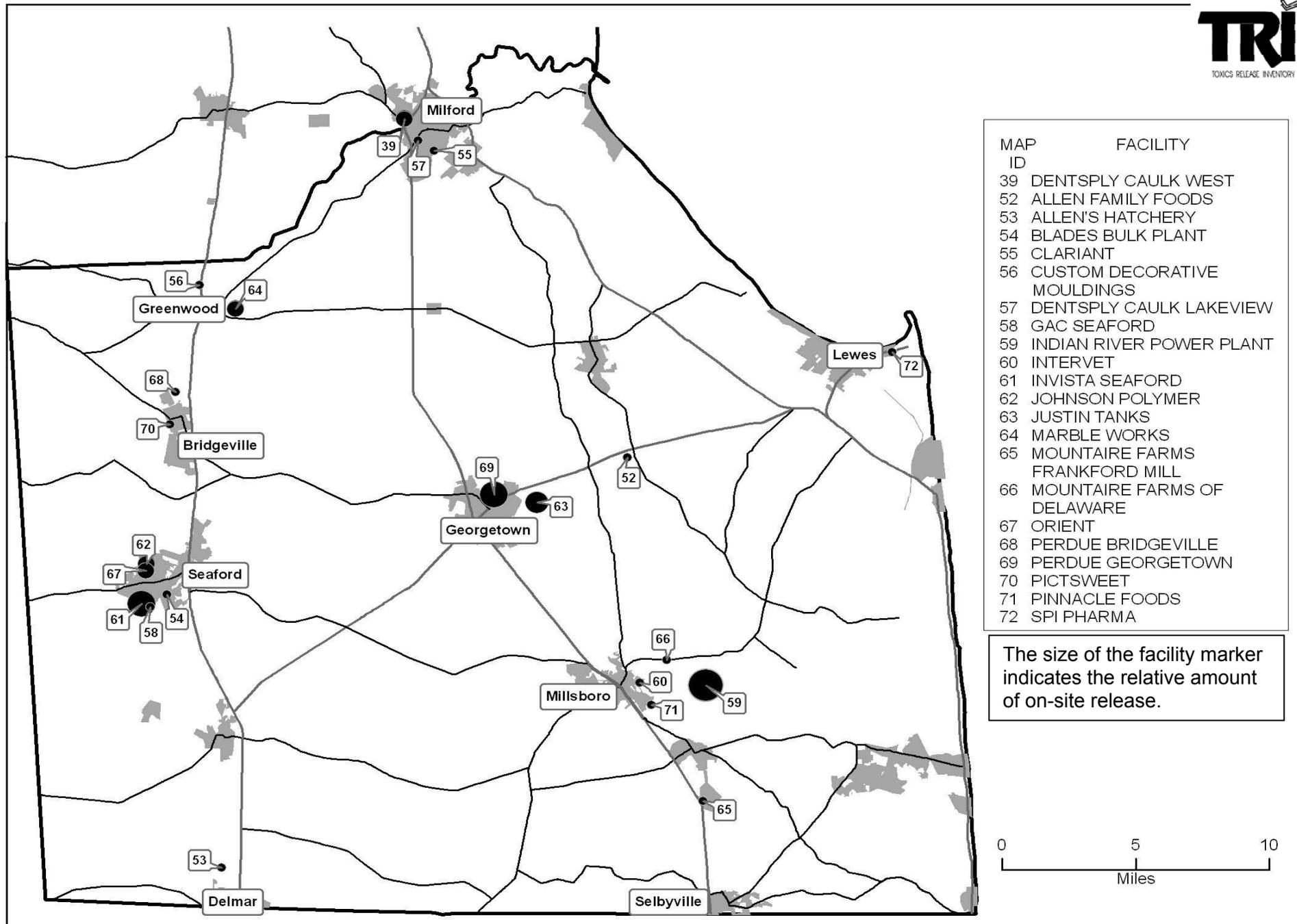
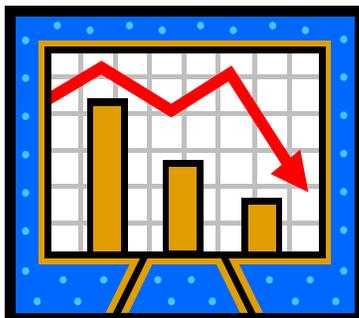


FIGURE 6 - TRI FACILITY LOCATOR MAP 2005

TRENDS OVER TIME

In addition to the reported releases for the latest year, DNREC also looks at how the releases are changing



over time. If a type of release is trending up or down, we will look for reasons why. It may be because a new group of chemicals, such as the PBT's, is now being reported. It may be that a facility has changed the way it estimates the release because it found a more accurate way to do this, and the actual release may not have changed very much. Whatever the reason, we look at trends as long-term indicators for the way activity is changing. We also look at trends for potential issues that need investigation.

The EPA also adds chemicals and facilities to the TRI program when it discovers chemicals that are significant toxics or that some facilities as a group tend to manufacture or use toxic

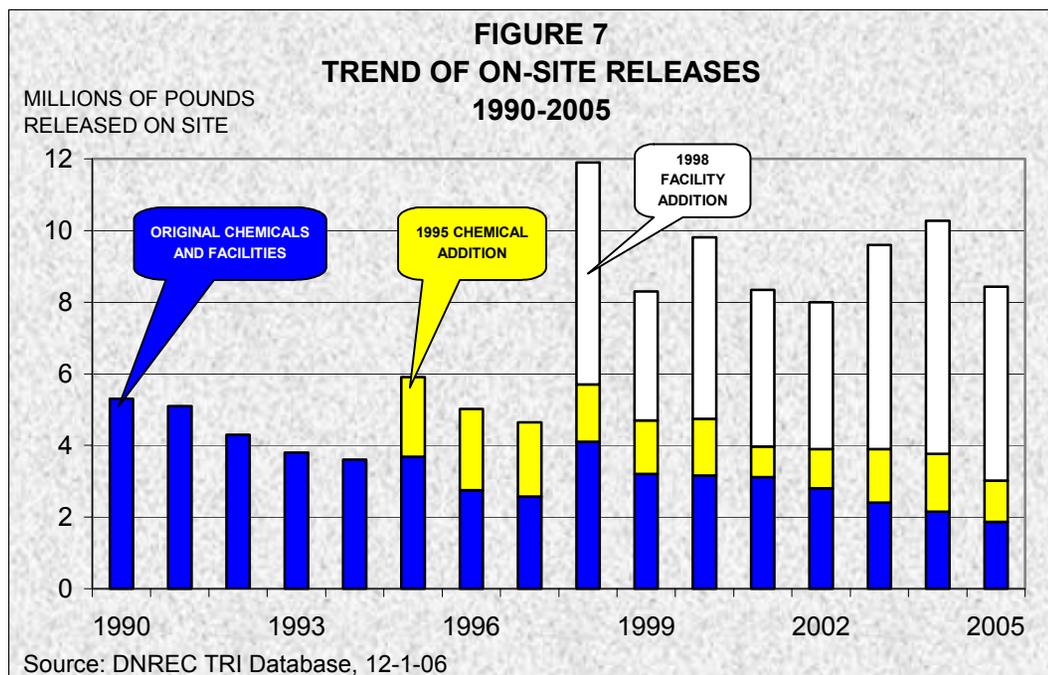
chemicals. Figure 7 shows the trend of the on-site releases since 1990. This graph shows the result of adding chemicals and facilities and industry efforts to reduce releases. Usually a few chemicals are added or deleted every year and they are included in the totals for that year.

Since 1990, on-site releases of facilities and chemicals in the original TRI program list have trended down

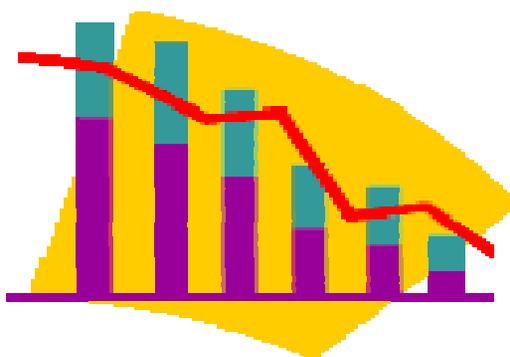
over time and are now 64% lower than the original amount reported.

In 1995, a large group of chemicals was added and the total number of chemicals increased to 667 from the 365 reportable in 1994. This group has trended down 50% since it was added in 1995.

In 1998, a group of facilities was added. This group included electric



generating facilities, as well as some chemical and petroleum

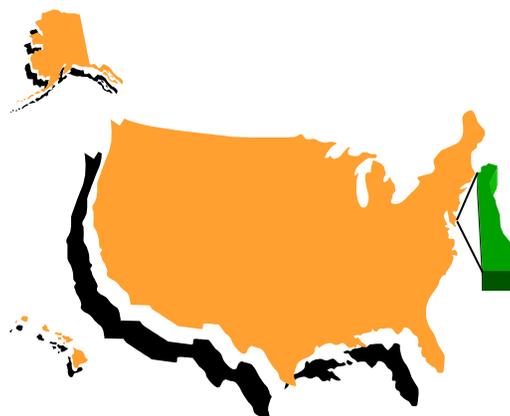


distribution facilities. The Indian River Power Plant (in the 1998 group) improved the accuracy in the way it calculates one of its on-site release amounts in 2003, and its 1,700,000-pound increase was the primary reason for the increased state total in 2003. This same facility had an increase in production in 2004 which again increased its releases, but in 2005, impurities in its coal were lower, which reduced its releases. The 1998 Facility Addition group is now 13% lower than its original reported amount in 1998.

The amount of on-site releases for each group is now lower than its original amount. If each group had remained constant at its original

reported amount, the amounts reported today would be 13.7 million pounds instead of the 8.4 million pounds actually reported, a reduction of 39%. We hope that this downward trend will continue.

NATIONAL PERSPECTIVE



Because Delaware is a small state, it may be helpful to see how it compares to other states and to the nation.

At the time of this report, the EPA has not released the national 2005 TRI report, so we could not compare our 2005 data with the national 2005 data. However, we did compare our data with the 2004 national data.

Following are some highlights from this comparison:

1. Delaware ranks 44th in the nation for total on-site releases.
2. Sixty-five facilities in the nation each released more on-site individually than all the facilities in the State of Delaware combined.
3. Delaware provided 0.23% of the total on-site release amounts in the nation.

Some facilities in Delaware rank at or near the top of the national rankings for specific releases.

DuPont Edge Moor ranks #1 in the nation for off-site transfer of dioxin and dioxin-like compounds.

Formosa Plastics ranks #4 in the nation for on-site release of vinyl chloride and #15 in the nation for on-site release of vinyl acetate.

Premcor ranks #36 for on-site release of hydrogen cyanide and #33 for cyanide compounds.

Occidental Chemical has now closed their mercury-based operation, but in 2005 the facility ranked #28 for total on-site release

of mercury and #11 for on-site air release of mercury.

DaimlerChrysler ranks #30 for on-site release of n-methyl-2-pyrrolidone.

The **Indian River Power Plant** ranks #53 for on-site release of hydrochloric acid.

These rankings may change when the 2005 data is published, as the new data may be greater than or less than the 2004 data for a specific comparison.

EPA CHANGES TO THE TRI PROGRAM AND DNREC'S RESPONSE

The EPA has enacted a change to the TRI reporting requirements for the short Form A. No amounts are reported on Form A, only that the facility manufactured, processed, or otherwise used the chemical at its facility. The change:

1. Increases the Form A total waste amount threshold for reporting to 5,000 pounds,

up from the current 500 pounds for non-PBT reporters. Waste amounts above the threshold, along with other details, are reported on Form R.

2. Establishes a Form A non-PBT on-site release threshold amount of 2,000 pounds. Again, higher amounts are reported on Form R.
3. Allows reporting of PBTs, except dioxins, on Form A if no release or disposal activities occur, and total waste management of the chemical is less than 500 pounds. Reporting of PBTs on Form A is currently not allowed.

DNREC opposed this proposal for the following reasons:

1. We believe that the proposed rule is inconsistent with the 2000-2001 expansion of PBT reporting, which provides more information to communities where chemicals are used.
2. Although EPA claims this is an incentive to reduce TRI waste, we believe that it is not. The rule allows increased waste release and generation, up to the 2,000 and 5,000-pound thresholds, without reporting exact amounts.
3. We believe that there will be a significant loss of data associated

with the possible conversion of standard Form R reports to the short Form A reports (29% of the Form R reports filed in 2005 will be eligible for conversion).

4. A small release does not mean a small risk. Some non-PBT chemicals are highly toxic, and the loss of data contained in the current Form R reports could be significant to communities where small amounts of these chemicals are used and possibly released.

Appendix M in the 2005 TRI Data Detail Report contains the full text of the DNREC response to the original proposal, which is similar to the final rule, and Appendix N contains the TRI reporting forms, illustrating the amount and type of data that would be lost when a Form R report is converted to a Form A report.

The EPA had also indicated that, in 2006, it would propose changing TRI reporting to every other year instead of every year. However, bowing to strong opposition from many citizens and organizations to this plan, EPA has dropped this proposal. The link to EPA's TRI page can be found in the **Other Sources of Information** section on page 18.

OTHER SOURCES OF INFORMATION

Information about TRI and related programs is available from several additional sources. Some of these sources are shown below. Other sources can be found in the [2005 TRI Data Detail Report](#).



Access to the TRI Files - DNREC is responsible for collecting, processing, and distributing information submitted by Delaware facilities under the TRI program.

The 1998-2005 TRI annual reports may be viewed at: <http://www.serc.delaware.gov/reports.shtml> Additional details and information not contained in the reports are available to the public through the EPCRA Reporting Program located within DNREC. A searchable database is located at: <http://www.serc.delaware.gov/services/search/index.shtml> .

Delaware's Department of Natural Resources and Environmental Control has publications, reports, and information available for a wide variety of programs at: <http://www.dnrec.delaware.gov/info/ELibrary.htm> .

In addition to TRI reports, there are other provisions of the Emergency Planning and Community Right to Know Act (EPCRA) that provide information to the public and to local emergency planning and response organizations. For additional information, visit the Delaware EPCRA website at: <http://www.serc.delaware.gov/epcra.shtml> .

EPA's TRI Home Page - The TRI home page provides information on the many facets of the TRI program at EPA, including an Executive Summary, Q&A's, a link now to the 2004 TRI data, and later this year to 2005 data, 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/tri/ .

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 www.epa.gov/tri/tridata/index.htm . The 2005 edition of this report will be available later this year and will be available for review at the DNREC office at 156 South State Street in Dover. Paper copies can also be obtained by calling EPA at (202) 564-9554.

Right-to-know Network - Searchable nationwide TRI data is 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.rtk.net .

Delaware Public Health Cancer Rates and Causes - This site provides data and answers to many cancer-related questions. <http://www.state.de.us/dhss/dph/dpc/cancer.html> .

Delaware Toxics Release Inventory

Delaware Department of Natural Resources and Environmental Control



Emergency Planning and Community Right to Know Program
156 South State Street
Dover, Delaware 19901
302-739-9405

The Department of Natural Resources and Environmental Control is committed to affirmative action, equal opportunity, and the diversity of its workforce.

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