

DELAWARE TOXICS RELEASE INVENTORY DATA DETAIL



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Prepared by the EPCRA Reporting Program
Department of Natural Resources and Environmental Control

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DNREC MISSION STATEMENT

The mission of the Department of Natural Resources and Environmental Control is to ensure the wise management, conservation, and enhancement of the State's natural resources, protect public health and the environment, provide quality outdoor recreation, improve the quality of life, and educate the public on historic, cultural, and natural resource use, requirements and issues.

Front Cover: *This is a picture of the Calpine Edge Moor/Hay Road Energy Center in Edge Moor. The facility has reduced on-site releases by 60% since 2008 and 72% since 1998.*

Photo used with permission of Calpine.

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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 2009. DNREC publishes this report as part of our effort to inform citizens about environmental issues in their communities. This is the 23rd year of TRI data collection. TRI has been successful in two ways. First, it has proved to be a consolidated, easy to use tool for tracking multi-media information on toxic chemicals used and released by facilities. Second, the public availability of the data has proved to be an effective tool in prompting facilities to reduce their releases of toxic chemicals.

Chemical releases and other waste management reported by TRI facilities for 2009 in Delaware were significantly lower compared to 2008. Virtually all categories of releases and waste management were lower, some by more than 40%. On-site releases were 44% lower compared to 2008, off-site transfers were down 28%, and on-site waste management, down by 22%. Enhanced pollution controls take some of the credit, but another significant cause was the impact of the economy.

For 2009, economic conditions affected production at many facilities. Production indexes at many TRI reporting facilities were generally down, with 180 reports out of the total 254 chemical reports showing reduced production involving the reported chemicals. The top 15 facilities reported 4.0 million pounds lower on-site release amounts than for 2008. These facilities represent over 99% of the total on-site releases, and 13 of these 15 facilities reported lower on-site release amounts than for 2008.

Some of the reductions were because of improved environmental controls, and analysis provided in this annual TRI report will attempt to quantify how much of the reduction was the result of environmental controls. For example, the Indian River Power Plant reduced its on-site release of hydrochloric acid by 1,107,000 pounds (40%) in 2009. Total on-site releases at this facility decreased significantly by 40%, or 1.5 million pounds, for 2009 compared to 2008. However, production for 2009 at this facility was reported as 24% lower than for 2008, which accounted for about 903,000 million pounds. The remainder, a significant amount of about 606,000 pounds, was because of improved environmental controls.

Loss of three major reporting facilities – Chrysler, General Motors, and Dow Reichhold – played a small but measurable part in the reductions for 2009; those facilities reported a total of 191,000 pounds of on-site releases in the 33 chemical reports filed in their last declining year (2008) of operation.

We publish two TRI documents annually: This more technical *TRI Data Detail Report* and the shorter *Data Summary Report*, a more compact, less technical report. These reports, and reports for recent years, are available at DNREC offices, and also at <http://www.serc.delaware.gov/public.shtml>. They are also available at Delaware public libraries. Specific facility data from 1995-2009 are also available at the above web site, 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.

I urge you to take advantage of the information in this report and of the many other resources available to you to obtain information on the management of chemicals in and around your community, and I also encourage our industrial citizens to continue to reduce releases of pollutants.

Sincerely,



Collin O'Mara, Secretary,

Department of Natural Resources and Environmental Control

Executive Summary

The 2009 TRI data represents the 23rd year of data collection from facilities for distribution to the public, and the TRI program continues to fulfill its goal of providing chemical use, release, and waste management information to the public. The increased attention given to releases and management of chemicals through the TRI reporting requirements continues to drive an increase in knowledge about the releases, as well as efforts to achieve reductions in releases.

For 2009, total on-site releases reported in Delaware show a decrease of 4,211,000 pounds (44%). Three facilities - Chrysler, General Motors, and Dow Reichhold - closed in 2008 and did not report for 2009. They reported a small, but measurable, total of 191,000 pounds of on-site releases for 2008. We saw significant decreases in releases of hydrochloric acid from two electric generating facilities and one manufacturing facility, and facilities reported decreases in on-site releases of more than 10,000 pounds for 32 individual chemicals, including 15 reports with decreases of more than 100,000 pounds.

The declining economy in Delaware played an important part in the reduced amount of releases and waste management. Production at many of the facilities was down for 2009, and about 53% of the reduction in on-site releases can be attributed to reduced production at the facilities, while about 47% of the reduction is because of pollution control efforts. Overall, results from the 2009 TRI data show (most amounts rounded to the nearest 1,000 pounds):

- The total amount of TRI chemicals reported as released to air for 2009 decreased by 2,657,000 pounds (46%), compared to 2008. The largest change in this category was hydrochloric acid aerosols released from the Indian River and Edge Moor power plants, which together reported 2,009,000 pounds, 47% less than their 2008 amounts. Both facilities reported decreased power production for 2009 and implemented portions of Regulation 1149, resulting in reports of lower releases of hydrochloric and sulfuric acid.
- The total amount released on-site to water decreased by 1,206,000 pounds (43%), including nitrate compound reports from the Premcor refinery with a reduction of 814,000 pounds (38%), the INVISTA facility, which was below the reporting threshold in 2009 for nitrate compounds, a reduction of 250,000 pounds, and from Perdue Georgetown, a reduction of 134,000 pounds (41%).
- The total amount released on-site to land decreased by 348,000 pounds (39%). This was primarily the result of the Indian River Power Plant reductions in releases to their on-site landfill. The amount of TRI chemicals (metal compounds) reported as sent to the on-site landfill decreased by 350,000 pounds for 2009, and this was partially offset by an increase in releases to on-site land of 7,000 pounds by Evraz Claymont Steel.
- The trend for on-site release of carcinogens decreased by 133,000 pounds, or 43% for 2009, and has declined 681,000 pounds (80%) since 1998.
- The trend for on-site release of persistent bioaccumulative toxins (PBTs) was down by 13,560 pounds for 2009, also the result of lower Indian River Power Plant disposals.
- Total TRI waste, including releases on-site, transfers off-site for treatment and disposal, and waste management on-site, declined by 24%. Transfers off-site declined 28%, and waste managed on-site declined by 21%. These declines were led on-site recycle, down by 48%, followed by off-site transfers to wastewater treatment, down by 43%, off-site energy recovery, down 37%, and on-site energy recovery, down by 30%.

Additional detail regarding the changes noted above, as well as discussion related to the top 15 facilities can be found in the Facility Profiles section starting on page 17 of this report.

Introduction

What is the Toxics Release Inventory?

The Toxics Release Inventory, or TRI, is a publicly available data set containing information reported annually for toxic chemicals manufactured, processed, or otherwise used by certain facilities in Delaware and throughout the United States. Annually, these facilities report releases and waste management information for covered chemicals. The reportable list of toxic chemicals for 2009 included 581 individual chemicals and 30 chemical categories. TRI was established in 1986 under Title III, Section 313, of the Federal Superfund Amendments and Reauthorization Act (SARA 313) to provide information to the public about the presence and release of toxic chemicals in their communities. Title III is also known as the Emergency Planning and Community Right-to-Know Act (EPCRA). See Appendix A for more information.

Covered 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 that is updated as new reports and revisions to old reports are received. The database currently contains 23 years of reported data. Most releases reported under TRI are also regulated through Federal and/or State permits.

This report contains detail from every 2009 TRI report and report revision from Delaware facilities filed with and received by DNREC as of October 1, 2010. Facilities must submit these reports to DNREC and the EPA by July 1 of each year. Several types of analyses are presented in this report based on this data and data from prior years. A second, less detailed report is also available that provides a summary of the data presented here. See [Access to TRI Files](#) on page 54 for details.

Reporting Requirements

A facility is required to submit a report for a listed toxic chemical if the facility meets all 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 reporting industries), and,
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. Threshold limits for specific chemicals known as PBTs (Persistent Bioaccumulative Toxics) are lower (see Table 7 on page 31).

Note that from time to time, the EPA proposes changes in reporting requirements. It gives agencies, reporting facilities, and other interested parties time to comment on these changes prior to making a final decision about the proposed change. See page 5 for more details.

Facilities that meet the criteria for reporting must submit one report for each listed toxic chemical if it was manufactured, processed, or otherwise used above threshold quantities. The reports cover releases and waste management 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 toxic chemicals, because reporting is based on the amount manufactured, processed, or otherwise used, and not the amount released.

Table 1 is a list of covered industries reporting to the Delaware TRI program for 2009 along with the corresponding three primary digits of the North American Industrial Classification System (NAICS) Codes. NAICS 6-digit codes are used to identify the type of activities performed at a facility. Each industry sector represented by facilities reporting in Delaware for 2009 is shown in Table 5 on page 16. NAICS codes were used in TRI starting in 2006 to provide more discrimination between the various industry sectors reporting to TRI. They do not correspond directly to the Standard Industrial Classification (SIC) 4-digit codes that were in use through 2005. Because of this, the diversity of industries reporting to TRI, and the differences in code definitions, all the facilities that were in a particular SIC code may not remain together in a NAICS code.

**TABLE 1
COVERED INDUSTRIES**

NAICS CODES	INDUSTRY
212	Mining
221	Utilities
311	Food Manufacturing
313	Textile Products Mfg.
324	Petroleum and Coal Products Mfg.
325	Chemical Manufacturing
326	Plastics and Rubber Manufacturing
331	Primary Metal Manufacturing
332	Fabricated Metal product Mfg.
334	Computer and Electronic Product Mfg.
335	Electrical Equipment Mfg.
336	Transportation Equipment Mfg.
337	Furniture Manufacturing
339	Misc. Manufacturing
424	Wholesalers, Non-Durable Goods
454	Non-Store Retailers
928	National Security

The standard Form R report (see Appendix M for Form) contains general facility information and complete data about on-site releases, off-site transfers, and on-site waste management activities. Form R can be used for all TRI reports. In lieu of Form R, the optional short Form A report (see Appendix N for Form A) may be used provided certain criteria are met. Form A, initiated in the 1997 reporting year, is a two-page report that provides facility information (essentially the same as Form R) and identification of the chemical, but does not provide any release, transfer, or waste management data. Nationwide, 14% of the TRI reports were filed as Form A, but in Delaware only 11% were filed as Form A. After a facility determines that it must report on a given chemical, the facility is eligible to use Form A if:

For non-PBT chemicals:

1. The total annual reportable amount (including the sum of on and off-site releases, disposal, treatment, recovery for recycle or energy) is less than 500 pounds, and
2. The total annual amount of the chemical manufactured, processed, or otherwise used does not exceed 1,000,000 pounds.

For Persistent Bioaccumulative Toxic (PBT) Chemicals including dioxins:

1. PBTs, including dioxins and dioxin-like compounds, may not be reported on Form A.
2. Starting in 2008, an additional form, Schedule 1, was also required for dioxins.

For reporting years 2006-2007, limited reporting of non-dioxin PBTs which had no releases was allowed, but that provision was revoked starting in 2008 and PBT reporting requirements (Form R only) were returned to the levels of 2005 and earlier years as shown above.

Because of the lack of data in the Form A reports, DNREC has been working with the reporting facilities and emphasizing the importance of reporting on Form R. Delaware had a decrease of eight Form A reports for 2006, one for 2007, thirteen for 2008, and two for 2009.

Limitations of TRI Data

The user of TRI data should be aware of its limitations in order to interpret its significance accurately.

- **NOT ALL FACILITIES ARE REQUIRED TO REPORT.** A relatively small number of facilities in Delaware are required to report under TRI, based on the criteria listed on pages 2-4. TRI facilities are primarily industrial/manufacturing facilities and facilities report releases and other waste management activity to TRI. TRI does not account for amounts of hazardous material stored at facilities. The DNREC program addressing inventories of material stored on site, the Hazardous Chemical Reporting program known as “Tier II” (also administered under EPCRA), includes a much greater number of facilities. Facilities report amounts and the location of chemicals stored on-site to Tier II, but not releases. For further information, see *Hazardous Chemical Reporting* in Appendix A.
- **OTHER SOURCES NOT COVERED UNDER TRI ALSO RELEASE TOXIC CHEMICALS.** Other significant sources of pollution include small businesses, motor vehicles, and agricultural operations, as examples. For some chemicals, their use as consumer products is a significant source of releases.
- **FACILITIES ARE REQUIRED TO BASE TRI DATA ON MEASUREMENTS AND MONITORING DATA IF THESE ARE AVAILABLE AT THE FACILITY.** If such data is not available, quantities may be estimated based on published emission factors, mass balance calculations, or good engineering judgment. Additional monitoring equipment and measurements are not required. For 2009, 10% of the reports representing 35% of reported on-site release amounts were estimated using monitoring data, with the balance being split between emission factors, mass balance calculations, and other methods.
- **THE DATA ESTIMATION METHODS MAY CHANGE OR VARY.** The methods of estimating, analytical methodology, or basis of calculating data used by different facilities, or even the same facility over time, may vary, and may result in significant changes in reporting while the actual release may remain relatively unchanged. DNREC performs cross-checks of the data with other information sources to verify its accuracy and contacts facilities concerning apparent discrepancies.
- **REVISIONS TO FORM R DATA MAY OCCUR AT ANY TIME.** These revisions sometimes involve significant changes for data previously reported by a facility.
- **THE DATA DOES NOT INDICATE THE AMOUNT OF HUMAN EXPOSURE.** 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 weather and wind direction and the proximity of nearby communities to the release must be considered when assessing exposures. Small releases of highly toxic chemicals

may pose greater risks than large releases of less toxic chemicals. The potential for exposure increases the longer the chemical remains unchanged in the environment.

Some chemicals may quickly break down into less toxic forms, while others may accumulate in the environment, becoming a potential source of long-term exposure. The chemical exposure of a population depends on the environmental media (air, water, land) into which the chemical is released. The media also affects the type of exposure possible, such as inhalation, dermal exposure, or ingestion.

Despite these limitations, TRI serves as a valuable screening tool to identify areas of concern that may require further investigation.

Recent Developments in TRI Reporting

The TRI reporting requirements change as the EPA seeks to improve the program through changes to the list of reportable chemicals and through program expansions. Because of these changes, considerable caution must be exercised when comparing TRI data from previous years. Some of the data presented later in this report will be adjusted for changes that have been made in order to present the data on a more constant reporting basis from year to year. Notations will be made to indicate which data is presented with these adjustments.

- **SIC/NAICS**

Starting in the 2006 reporting year, four-digit facility SIC (Standard Industrial Classification) codes were phased out and replaced with six-digit NAICS (North American Industry Classification System) codes. Facilities should not have been added or removed from TRI reporting because of this change. See page 3 for a listing of the primary NAICS codes reported to the Delaware TRI program for 2009, and additional discussion about NAICS, and page 16 for data reported by NAICS code.

- **Dioxin and Dioxin-Like Compounds for the 2008 Reporting Year**

There are seventeen distinct members of this chemical category listed under TRI. On May 10, 2008, the EPA Toxics Release Inventory Program issued a final rule expanding reporting requirements for the dioxin and dioxin-like compounds category. The final rule requires that, in addition to the total grams released for the entire category, facilities must report the quantity for each individual member on a new form. The reporting requirements of the final rule applied to the 2008 reporting year beginning January 1, 2008, (for which reports were due July 1, 2009), and to following reporting years. The EPA and DNREC will then use the individual mass quantity data to calculate Toxic Equivalent Quantity (TEQ) values that will be made available to the public along with the mass data. This data for Delaware facilities is presented in this report starting on page 33.

- **Electronic Reporting**

Starting with reporting year 2009, all TRI reports are received electronically. This reporting method had been an option through the EPA since RY 2005, and Delaware began to participate in electronic reporting as soon as it was available. Before electronic reporting was available, this report was typically published in April-May. Now, with the ability to receive and process facility reports faster, this report and the information in it is available in December.

2009 Data Summary

TABLE 2
2009 TRI DATA SUMMARY
(IN POUNDS)

	2009
No. of Facilities	62
No. of Form As	29
No. of Form Rs	225
No. of Chemicals	90
On-site Releases	
Air	3,183,506
Water	1,590,477
Land	537,489
Total On-Site Releases	5,311,472
Off-Site Transfers	
POTWs	636,602
Recycle	5,334,333
Energy Recovery	2,336,579
Treatment	140,248
Disposal	2,785,524
Total Off-Site Transfers	11,233,287
On-Site Waste Mgmt.	
Recycle	5,630,119
Energy Recovery	14,670,034
Treatment	38,179,139
Total On-Site Mgmt.	58,479,292
Total Waste	75,024,050

Statewide totals of reported 2009 TRI on-site releases, off-site transfers, and wastes managed on-site are shown in Table 2. On-site releases were lower by 44% (4,211,000 pounds) compared to 2008. Hydrochloric Acid accounted for 2,005,000 pounds of the decrease, and nitrate compounds accounted for another 1,199,000 pounds. Changes in production levels and pollution controls at many facilities accounted for decreases and a small number of increases. A total of 62 facilities submitted 254 reports on 90 different chemicals. Sixty-four fewer reports were submitted and ten less chemicals were reported for 2009. Of the 254 reports, 29 were submitted using Form A. Polycyclic aromatic compounds, lead compounds, and zinc compounds all had 10 or more reports. Releases to air, led by acid gases, constitute the largest portion (60%) of total on-site releases. Hydrochloric acid aerosols made up the largest portion of release to air, but the largest overall decrease.

Types of Data

Table 2 lists all the categories of data reported to Delaware and the EPA under the TRI program. Within the reports received from

facilities, the data is broken down into additional sub-categories. For ease of presentation in this report, the data has been grouped into these categories as described below.

On-Site Releases: There are four categories, but one of these, **underground injection** of TRI chemical waste to wells, is not permitted in Delaware. On-site releases in Delaware are to **air**, **water**, or **land**. The **release to air** category includes stack releases collected by mechanical means such as vents, ducts, or pipes, and fugitive releases escaping collection, including equipment leaks and evaporation, and is released into the general atmosphere. **Releases to water** are to water bodies, including streams, rivers, lakes, bays, or oceans. This includes releases from contained sources, such as industrial process outflow or open trenches. Releases to water which contain TRI-reportable chemicals in runoff and storm water runoff are also reportable. **Releases to land** are to (1) RCRA (Resource Conservation and Recovery Act) landfills, in which wastes are buried, (2) surface impoundments, which are uncovered holding areas used to volatilize and/or settle waste materials, (3) other land disposal such as waste piles or releases to land such as spills or leaks, (4) land application/treatment in which waste containing a listed chemical is applied to or incorporated into soil, and (5) other non-RCRA landfills.

Off-site Transfers: Off-site transfers include transfer of chemical waste to **POTWs** (publicly owned wastewater treatment plants), **recycle** operations (five types), **energy recovery** operations (two types), **treatment** operations (six types), and **disposal** (fourteen types). The receiving facilities are separate from the facility generating the waste. This total of 27 sub-categories is provided for the purpose of classifying the types of final off-site waste management undertaken for each chemical.

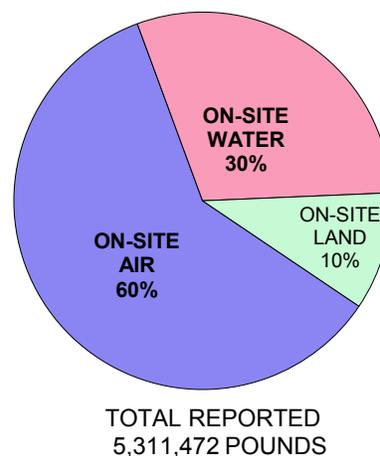
On-site Waste Management: Waste management operations at the facility generating the waste are categorized to include **recycle**, **energy recovery**, and **treatment**.

On-Site Releases

On-site TRI releases are emissions from a facility to the environment because of normal operations, including emissions to the air, discharges to surface water, disposal onto or into the ground, and underground injection. Underground injection is not an approved method of TRI or hazardous waste disposal in Delaware, and thus has not been reported by any facility in Delaware since TRI reporting began. Total on-site releases to air, water, and land reported to TRI in 2009 made up 7% of all TRI-reported waste amounts.

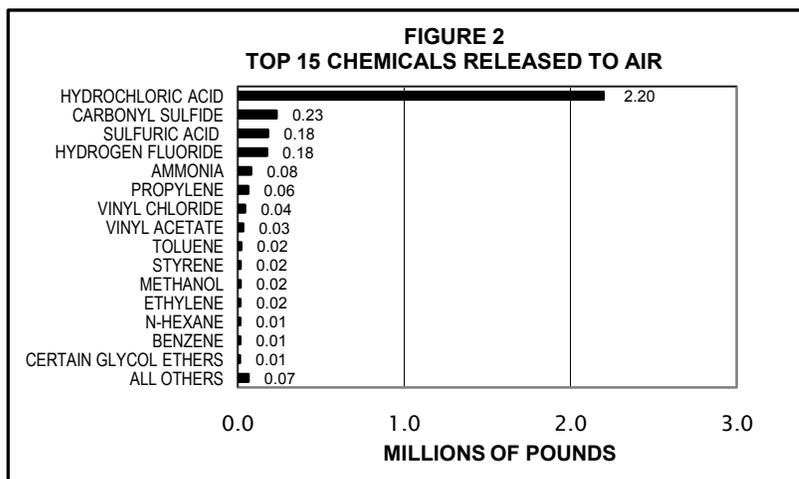
Figure 1 shows the totals of on-site releases reported in Delaware. A large portion, 60% of the total on-site release, is to air. Additional analysis of on-site releases is presented in Figures 2, 3, and 4, which show the top 15 chemicals released to air, water, and land. Additional detail about on-site releases can be found in Appendices C, E, F, and H.

**FIGURE 1
2009 ON SITE RELEASES**



Releases to Air

Figure 2 provides an illustration of the relative release of the top 15 chemicals compared to the other 62 chemicals reported as released in 2009 to the air. The remaining 13 chemicals had no reported releases to air. As in all the years following the 1998 inclusion of the power generating facilities, acid gases top the list. Specifically, hydrochloric and sulfuric acid aerosols (gases) and hydrogen



fluoride are released from power generating facilities located in all three counties. Although their production and release declined in 2009, these three chemicals comprise 80% of all

Delaware-reported TRI on-site releases to air. Two facilities reported carbonyl sulfide, which ranked #2 and accounted for 7.3% of all releases to air. DuPont Edge Moor was the primary reporter of this chemical. Carbonyl sulfide is a gas by-product of the titanium dioxide production process. Seven facilities reported ammonia, which accounted for 2.5% of all on-site releases to air. Ammonia is released from petrochemical, food processing, and chemical facilities and is a by-product of air pollution control activities, primarily at electric generating facilities. The Indian River Power Plant reported almost half of the total on-site ammonia release to air. The Premcor refinery, the only reporter of propylene, reported a 13% increase in this release to air for 2009 as the refinery continued to use new data to estimate the release amount from its Frozen Earth Storage system. Propylene accounted for 2.0% of all on-site releases to air for 2009. Vinyl chloride is used in the manufacture of polyvinylchloride (PVC). One facility, Formosa Plastics, reported on vinyl chloride, which accounted for 1.4% of all releases to on-site air. Formosa Plastics also reported all of the releases for vinyl acetate, which made up 1.0% of the releases to on-site air. The remaining chemicals released to air were each less than 1.0% of total releases to air.

Releases to Water

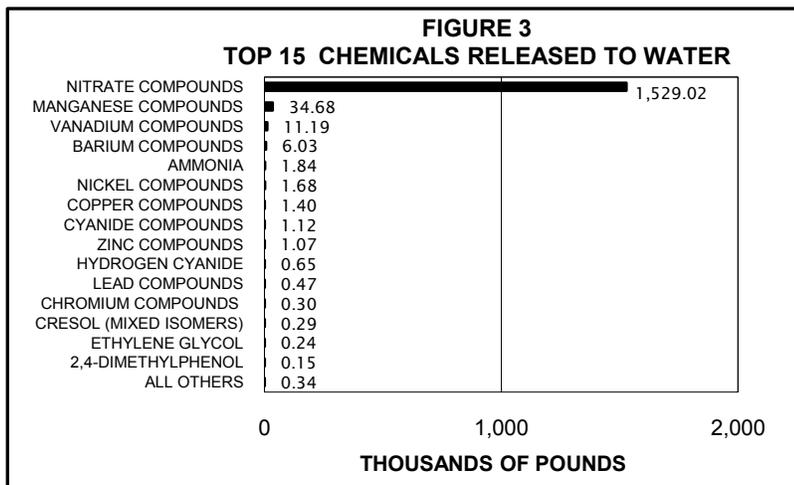
As can be seen in Figure 1 on page 7, releases to water were lower than releases to air. On-site releases to water made up 30% of the total on-site releases compared to 60% for air. Table 3 shows the amount of TRI chemicals released to each water body that received a TRI chemical. Delaware River received 88% of all releases to water. Figure 3 below shows the relative relationship of the top 15 TRI chemicals to all other chemicals (24)

**TABLE 3
TRI CHEMICALS RELEASED TO WATER BY WATER BODY IN 2009**

WATER BODY	NO. OF FACILITIES	NO. OF REPORTS	RELEASE (IN POUNDS)
DELAWARE RIVER	6	62	1,394,275
DRAWYER CREEK TRIBUTARY	1	2	10
ISLAND CREEK	1	8	3,087
MUDDY RUN	1	1	0
MUDSTONE BRANCH	1	1	0
NAAMANS CREEK	1	6	253
NANTICOKE RIVER	1	5	0
RED LION CREEK	1	1	0.0282
SAVANNAH DITCH	1	1	192,852
STATE TOTAL		87	1,590,477

reported as released to water. This clearly shows the influence that nitrate compounds have on the total. The Premcor refinery, Perdue Georgetown, and INVISTA reported a total decrease of 1,198,500 pounds of nitrate compounds released to water for 2009. These were part of the release reports for the Delaware and Nanticoke Rivers and the Savannah Ditch. More details of these releases can be

**FIGURE 3
TOP 15 CHEMICALS RELEASED TO WATER**



found in the facility profiles on pages 19, 20, 22 - 25. Figure 3 shows that nitrate compounds were the top chemical released, (96% of the total release to water), followed by manganese compounds (2.2%), vanadium compounds (0.70%), and barium compounds (0.38%). The remaining chemicals released to water were each less than 0.15% of the total releases to water. The biological treatment of

nitrogen-containing materials such as ammonia and animal waste is responsible for the formation of nitrate compounds. For nitrate compounds released to water, the Premcor refinery reported 1,336,000 pounds, Perdue Georgetown was the second largest reporter at 193,000 pounds, but INVISTA was below the reporting threshold for 2009, reporting 250,000 pounds for 2008. Manganese and vanadium compounds are products of petroleum refining, coal and oil combustion, and ore processing. Manganese compounds were released to water primarily by DuPont Edge Moor. DuPont reported 99.8% of the manganese compounds released to water. Vanadium compounds were released to water largely (99.5%) by the Premcor refinery. Metallic (antimony, barium, cobalt, chromium, copper, lead, manganese, mercury, nickel, vanadium, zinc) compounds are generally products of fuel combustion, and ore and metal refining. The DuPont Edge Moor, Edge Moor/Hay Road Power Plants, Indian River Power Plant, Evraz Claymont Steel, and the Premcor refinery are the primary facilities releasing these compounds to water. Ammonia is the by-product of pollution control activities and waste treatment. The Premcor refinery reported all of the ammonia releases to water.

Not every report to a water body in Table 3 shows a release quantity. For example, of the 62 reports listing the Delaware River as their possible destination watershed, 54 of these reports show an actual release quantity to the Delaware River. The other eight met the TRI reporting requirements and had the potential to release to the river and may have released chemicals to other media (air or land), but did not report any amounts actually released to the river. In Delaware, 16 of the 87 reports listing a water body as a possible destination for a release to water did not report any quantities actually released to that water body.

Table 4 shows the total amount of TRI chemicals for 2009 released to each basin in the State of Delaware. The Inland Bays include lands that drain into the Indian River Bay/ Rehoboth Bay area, then to the Atlantic Ocean. The Piedmont Basin contains lands that drain into the portion of the Delaware River above the City of New Castle. All the receiving streams except the Nanticoke River eventually feed into the Delaware Bay. The total amount released to water decreased by 1,206,000 pounds in 2009, largely the result of decreases in the reported release of nitrate compounds reported by the Premcor refinery, INVISTA, and Perdue Georgetown. Because nitrate compounds fell below the reporting threshold at INVISTA, no releases were reported to the Nanticoke River, which feeds into the Chesapeake Bay. Additional discussion about these releases can be found in the Trend Analysis Section starting on page 41 and in the facility profiles starting on page 17.

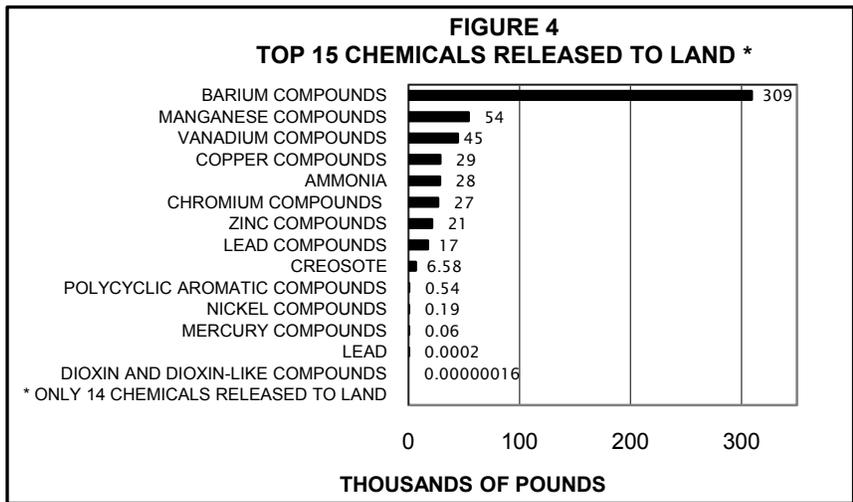
**TABLE 4
TRI CHEMICALS
RELEASED TO WATER BY BASIN**

BASIN	RELEASE	
	(IN POUNDS)	PERCENT
CHESAPEAKE	0	0.0%
DELAWARE BAY	1,546,096	97.2%
INLAND BAYS	3,087	0.2%
PIEDMONT	41,294	2.6%
STATE TOTAL	1,590,477	100.0%

Releases to Land

Releases to land, as shown in Figure 1 on page 7, are relatively small, amounting to 10% of total on-site releases in 18 reports. Figure 4 on page 10 shows the relative contribution for all 14 chemicals reported as being released to land. Nearly all the releases to land are metals and metal compounds except for the relatively small quantities of ammonia, creosote, PACs and dioxin/dioxin-like compounds (0.00016 pounds). Most of the metals and metal compounds reported are formed during combustion or refining processes from metal impurities that exist in coal or oil.

Barium compounds comprise 58% of the total releases to land, and all metallic compounds compose 93% of all releases to land. Metallic compounds - barium, manganese, vanadium, copper, chromium, zinc, lead, and mercury - released to on-site land by the Indian River Power Plant and shown as part of Figure 4, accounted for 92% of the total releases to land.



Additional discussion about these releases to land and their trends can be found in the Trend Analysis Section starting on page 41. Mountaire Farms of Delaware reported all the ammonia releases to land.

Descriptions about some of the hazards these chemicals released to air, water, and land may present can be found in Appendix K.

Off-Site Transfers

Off-site transfers are material transfers to off-site locations for the purpose of disposal, recycling, energy recovery, or treatment. Treatment could be at a private waste treatment facility or at a publicly owned treatment works (POTW), typically a city or county wastewater treatment plant. The amounts of chemical wastes transferred off-site, although lower by 28% since 2008, 15% of total waste and more than two times the amounts released on-site.

**FIGURE 5
2009 OFF-SITE TRANSFERS**

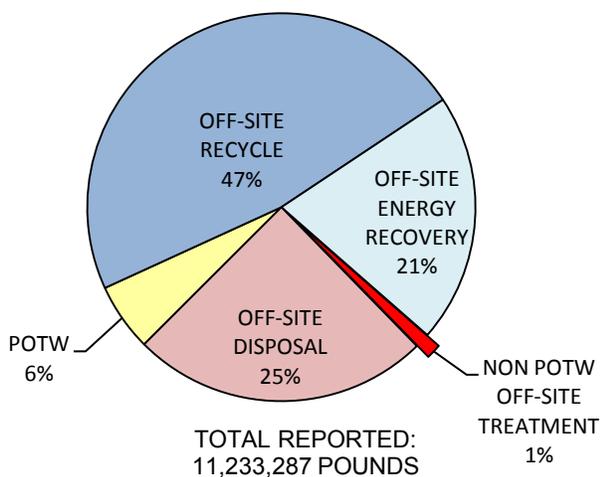


Figure 5 shows the relative portions transferred to the five off-site transfer categories. Table 2 on page 6 shows these amounts in tabular form, and Appendices D and G provide additional detail for transfers from each facility.

TRI chemicals in wastes are transported by various means from Delaware to their final destinations, many of which are out-of-state. TRI chemicals were sent to 22 states, some as far away as Utah and Texas, and also to Canada, in addition to locations in Delaware. Over 93% of TRI chemicals in all wastes and over 98% of non-POTW wastes transferred off-site were sent to out-of-state locations for further processing and/or disposal. Over 99% of POTW wastes generated by Delaware facilities are treated in-state.

While on-site releases account for 7% of total TRI waste, reported off-site transfers account for 15% of the total TRI wastes. See Figure 5 on page 10 for detail about how these wastes are managed. Off-site transfer to recycle operations accounted for 47% of the amounts within the five categories in off-site transfers, energy recovery accounted for 21%, disposals accounted for 25% of the transfers, and transfers to POTWs accounted for 6%. Eighty percent of the transfers to POTWs were to the City of Wilmington POTW, and all but 3,659 pounds of the 636,602 pounds treated at all POTWs were treated at Delaware POTW facilities. Ciba and the Rohm & Haas B2B3B8 facility combined for 79% of the total TRI transfers to the Wilmington POTW.

See page 47 for more information on Delaware facilities receiving TRI chemicals from other Delaware TRI facilities and from out-of-state TRI facilities.

On-Site Waste Management

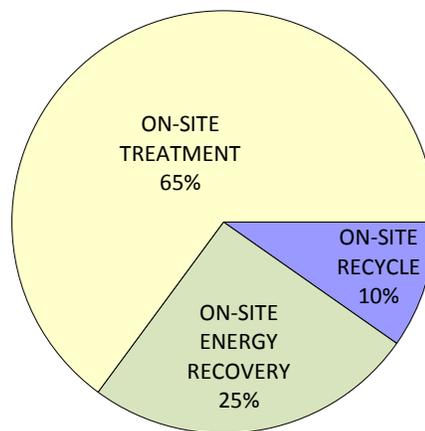
On-Site waste management is the amount of waste that never leaves the facility site and is managed by the facility on-site. The categories of **Recycle, Energy Recovery, and Treatment** are used to define on-site management activities related to TRI chemical wastes. The total amount of TRI chemicals managed on-site is 78% of the total TRI chemical waste and more than 11 times the amounts released on-site. Figure 6 shows the portions of these wastes processed on-site. Appendices D and G provide additional detail about management of this chemical waste.

Recycled waste (5.6 million pounds) is the quantity of toxic material recovered at the facility and made available for further use. The Rohm & Haas B2B3B8 and Medal facilities combined to report 90% of the total amount recycled.

Energy Recovery includes the quantity of toxic material (14.6 million pounds) that had heat value and was combusted in some form of energy recovery device such as a furnace. The Premcor refinery was the only facility in the State to report on-site energy recovery, reporting on seven chemicals.

Waste Treatment includes the amount of toxic material that was destroyed in on-site waste treatment operations. The Premcor refinery, DuPont Edge Moor, Noramco, and the Indian River Power Plant have the highest total amounts of on-site waste management, combining for 36.1 million pounds (96%) of the 38.2 million pounds of TRI waste treated on-site.

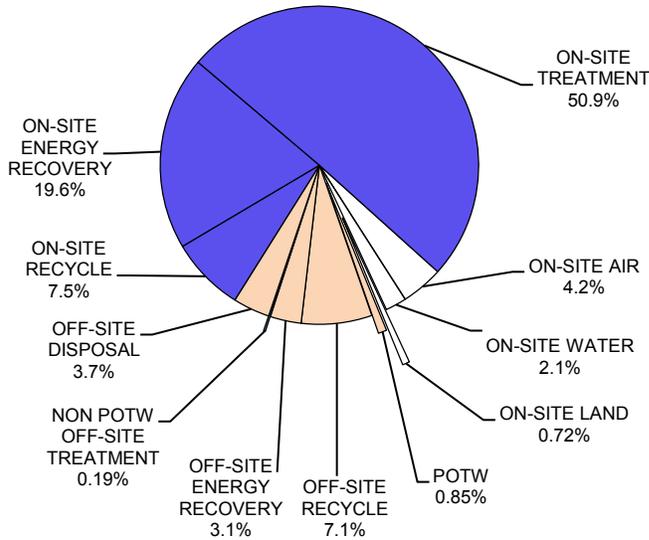
**FIGURE 6
2009 ON SITE WASTE MANAGEMENT**



TOTAL REPORTED:
58,479,292 POUNDS

Total TRI Waste

FIGURE 7
TOTAL 2009 TRI CHEMICAL MANAGEMENT
TOTAL REPORTED: 75,024,050 POUNDS



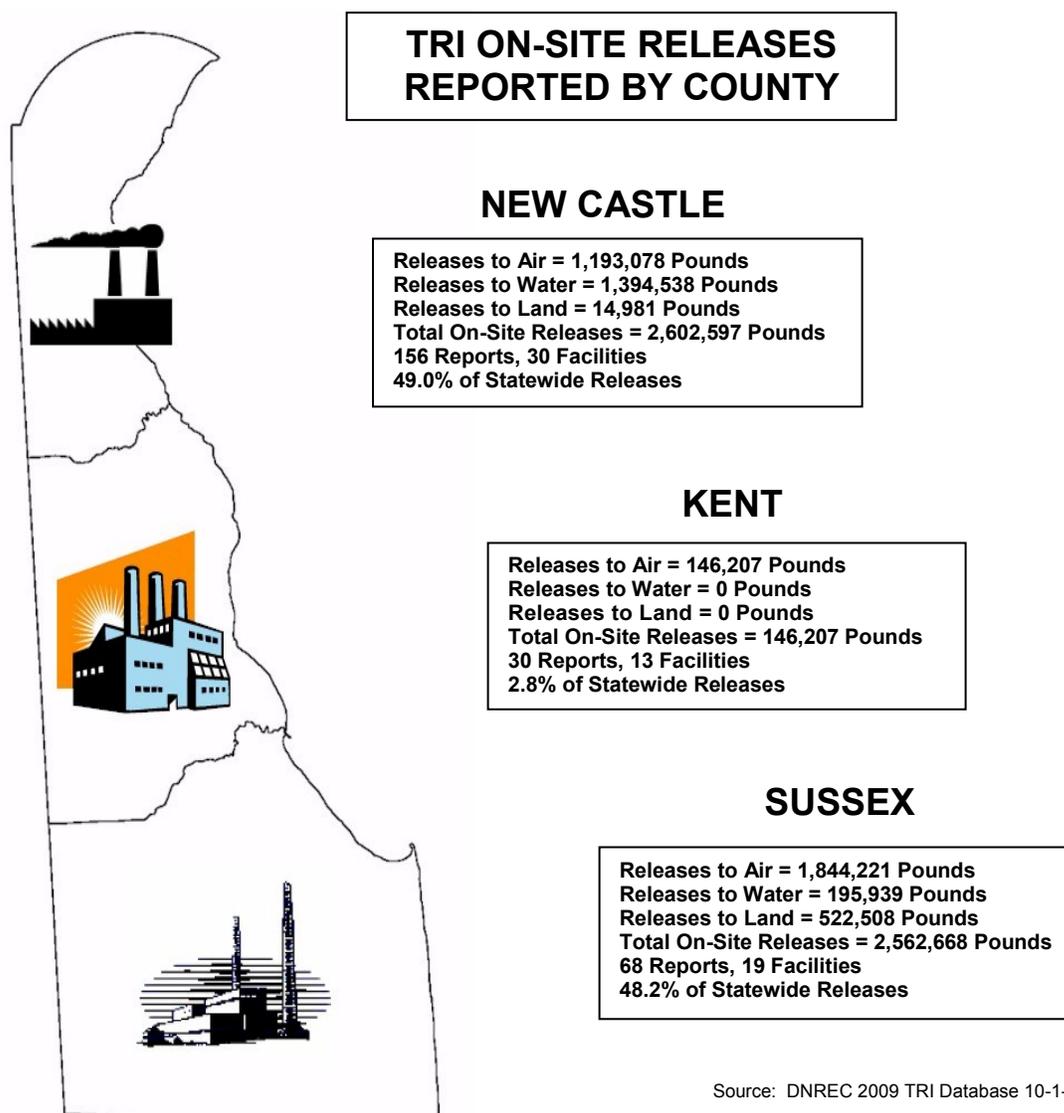
Total waste is the combined total of the on-site release, off-site transfer, and on-site waste management portions of the TRI chemical report. Figure 7 is a perspective of the total TRI chemical waste picture in Delaware. About 7% of the total reported TRI waste is released on-site, 15% is transferred off-site for treatment or disposal, and 78% is managed on-site through treatment, energy recovery, and recycle operations by the facilities generating the waste. Figure 7 shows the relative portions of each major and sub-segment of TRI release and waste management.

2009 Data Detail

On-Site Releases by County

Figure 8 below provides basic on-site release information for each county in the State.

FIGURE 8

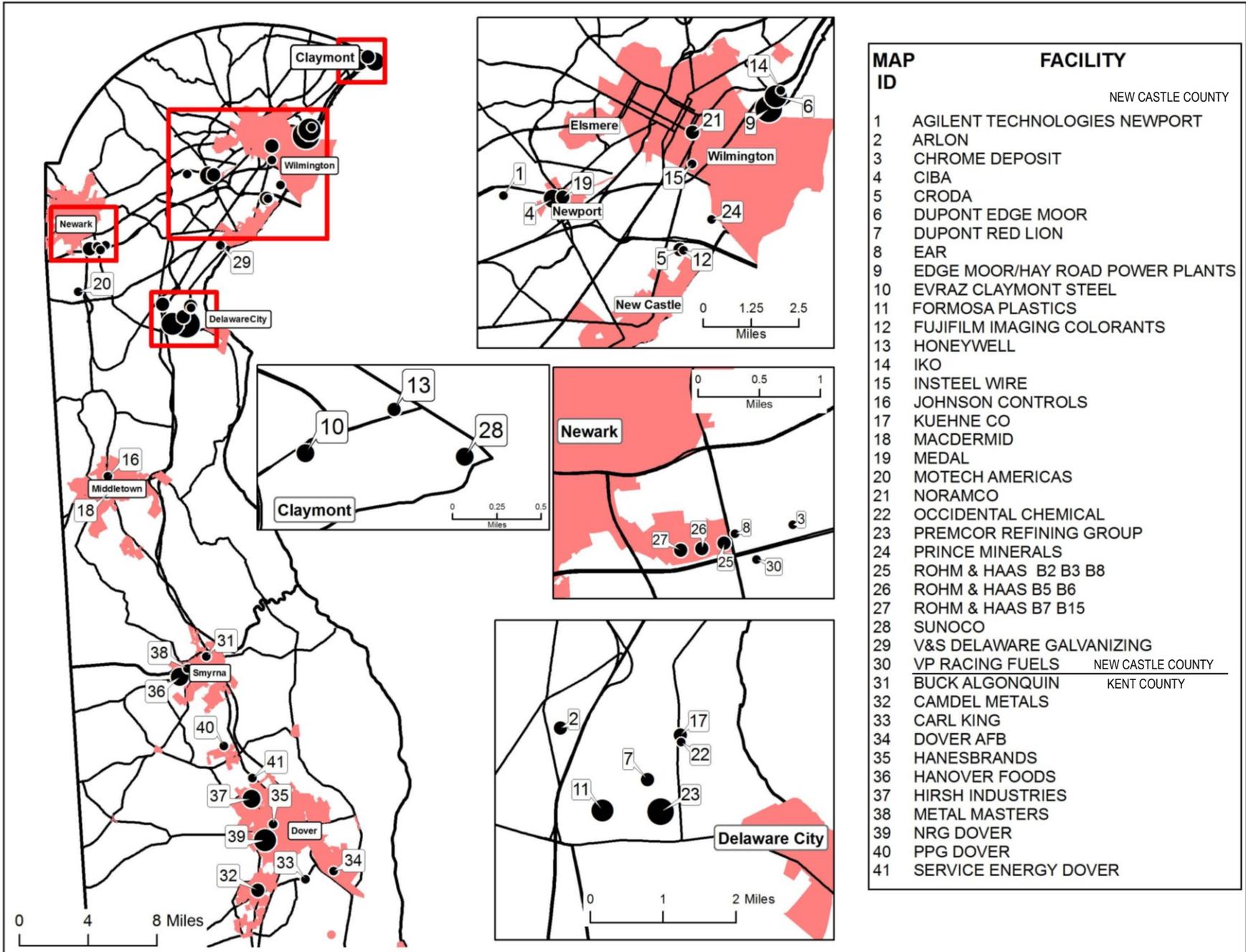


Source: DNREC 2009 TRI Database 10-1-10

Facility Locations

Figure 9 on the following two pages shows the location of each reporting facility in the State. The size of the facility location marker depicts the size of its on-site release relative to other facilities in Delaware. Facility contact information is in Appendix B.

FIGURE 9 TRI FACILITY LOCATOR MAP



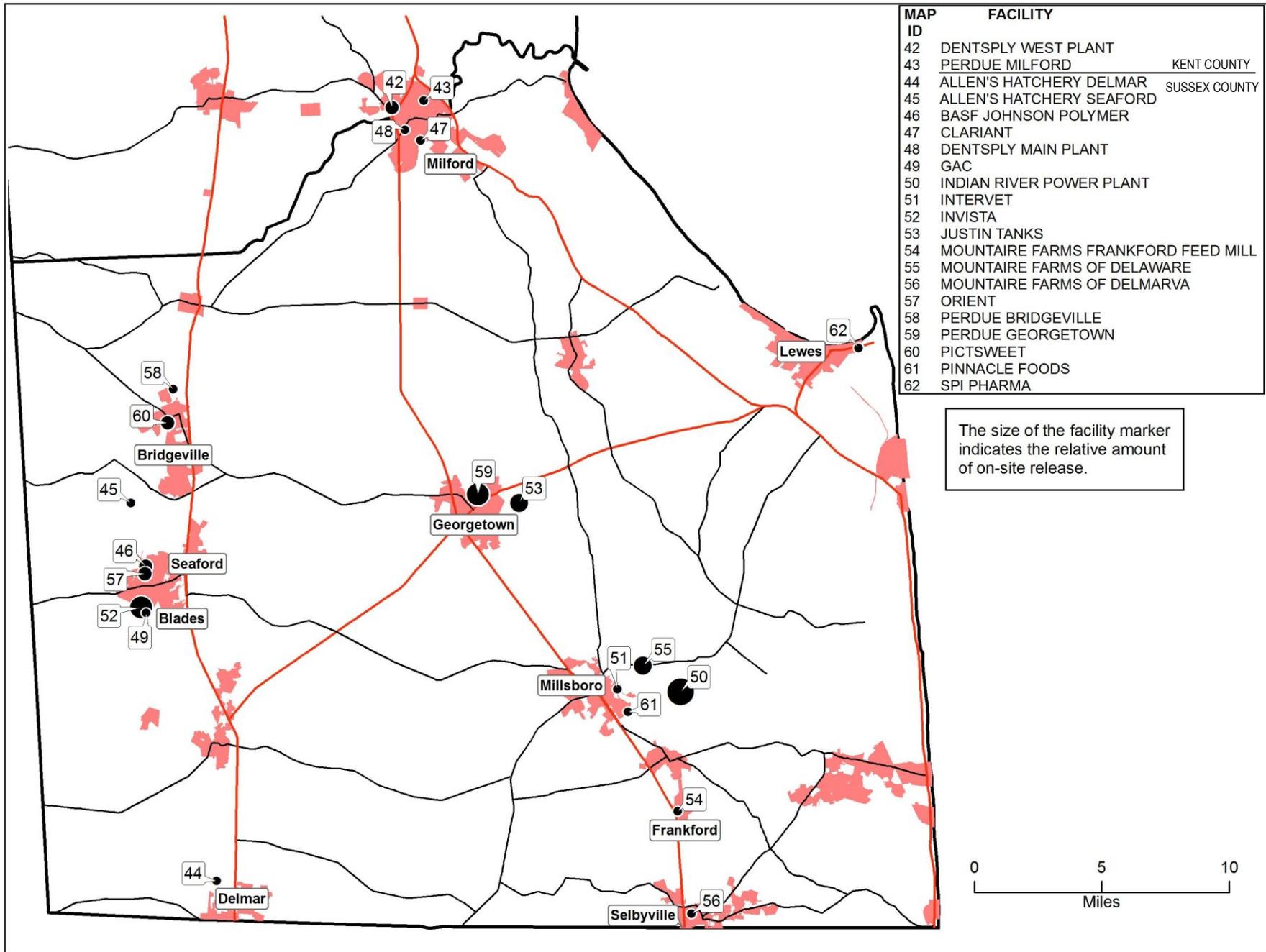


FIGURE 9 TRI FACILITY LOCATOR MAP

NAICS Industry Groups

Starting with the 2006 reporting year, NAICS codes replaced the SIC (Standard Industrial Classification) codes. Table 5 provides a description of each North American Industrial Classification System (NAICS) industry group and the number of facilities in each group that reported in Delaware, along with the total reported amounts for each NAICS code. This table also provides on-site releases, off-site transfers, and wastes managed on-site for each group.

TABLE 5
2009 TRI DATA BY PRIMARY NAICS GROUP

(in pounds)

NAICS CODE	INDUSTRY GROUP	NUMBER OF REPORTS	NUMBER OF FACILITIES	FORM A	FORM R	ON-SITE RELEASE	OFF-SITE TRANSFERS	ON-SITE WASTE MGMT.
212	Mining	4	1	0	4	141	0	0
221	Utilities	33	3	1	32	2,934,266	115,227	3,973,951
311	Food Manufacturing	31	11	16	15	234,772	0	52,543
313	Textile Products Mfg.	4	2	0	4	4,131	545,284	3,219,984
324	Petroleum & Coal Products Mfg.	52	5	3	49	1,607,991	92,796	24,520,169
325	Chemical Manufacturing	87	21	4	83	481,239	5,289,635	24,743,681
326	Plastics & Rubber Mfg.	9	4	0	9	19,597	76,330	1,968,964
331	Primary Metal Manufacturing	13	3	0	13	12,496	1,482,004	0
332	Fabricated Metal product Mfg.	5	4	0	5	7	203,457	0
333	Equipment Mfg.	0	0	0	0	0	0	0
334	Computer and Electronic Product Mfg.	1	1	0	1	0	137	0
335	Electrical Equipment Mfg.	2	1	0	2	178	3,367,219	0
336	Transportation Equipment Mfg.	0	0	0	0	0	0	0
337	Furniture Manufacturing	1	1	0	1	13,032	0	0
339	Misc. Manufacturing	4	2	0	4	3,358	61,197	0
424	Wholesalers, Non-Durable Goods	2	1	2	0	0	0	0
454	Non-Store Retailers	3	1	3	0	0	0	0
928	National Security	3	1	0	3	265	0	0
	TOTAL	254	62	29	225	5,311,472	11,233,287	58,479,292

FIGURE 10
TOP 5 NAICS INDUSTRIES FOR 2009
PERCENT ON-SITE RELEASE

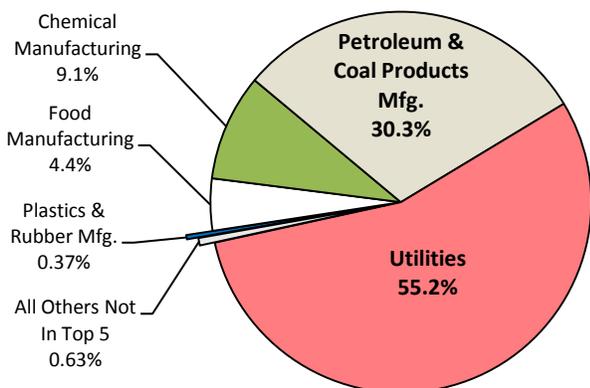


Figure 10 shows the percent contribution of each of the top five NAICS groups and all others not in the top five, compared to the reported total on-site releases. Three of these top five, NAICS groups 221 (Utilities), 324 (Petroleum and Coal Products Mfg.) and 325 (Chemical Mfg.), combine for 95% of the total on-site releases within the State. Facilities not in the top five NAICS industry groups reported contributions of only 33,608 pounds on-site, or 0.63% of the 2009 on-site release total.

RELEASES FROM THE TOP 15 FACILITIES

Figure 11 shows the relative contribution of each of the top 15 reporting facilities to on-site releases. The top three facilities are, or have as a significant portion of their facility, an energy generating operation. Of the 5,311,472 pounds that were reported as released on-site by all 62 facilities Statewide, the top 15 facilities accounted for 5,266,816 pounds, or 99.2% of the total on-site releases.

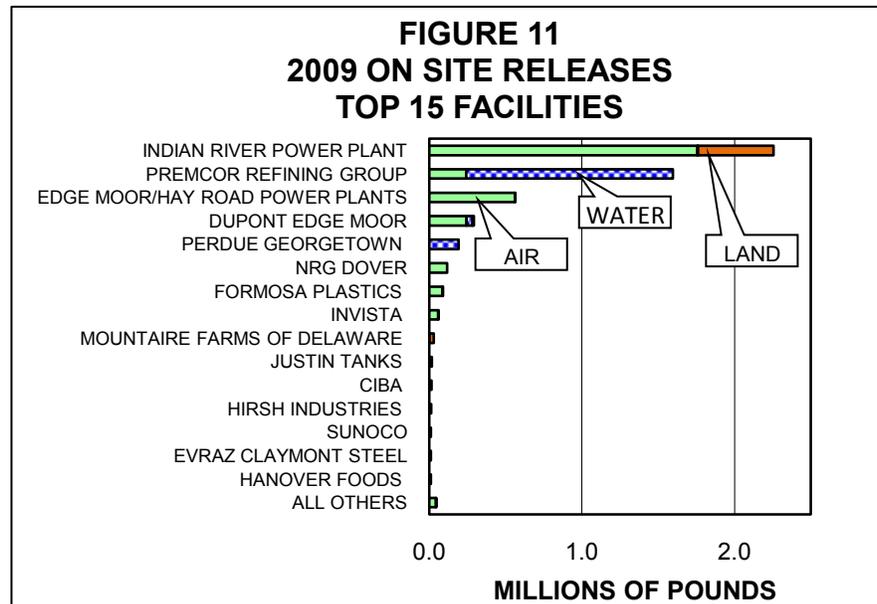


Table 6 shows the 2009 ranking of the top 15 facilities along with their 2008 ranking and the reported amounts of on-site releases for both years. Releases to the environment because of remedial actions, accidents, or one-time catastrophic events are included in these values. The percent change in total on-site releases for each of the top 15 facilities from 2008 to 2009 is also shown, and some of these changes are significant. Only two facilities (DuPont Edge

**TABLE 6
TOP 15 FACILITIES 2008 AND 2009 RANKING BY ON SITE RELEASE
(in pounds)**

2008 RANK	2009 RANK	FACILITY	2009			2009 ON-SITE RELEASE	2008 ON-SITE RELEASE	2008 TO 2009 CHANGE IN RELEASES	
			TOTAL AIR	TOTAL WATER	TOTAL LAND				
1	1	INDIAN RIVER POWER PLANT	1,757,479	3,087	494,082	2,254,648	3,764,276	(1,509,628)	-40%
2	2	PREMCOR REFINING GROUP	243,062	1,353,221	-	1,596,283	2,501,016	(904,733)	-36%
3	3	EDGE MOOR/HAY ROAD POWER PLANTS	561,653	841	-	562,494	1,409,994	(847,500)	-60%
6	4	DUPONT EDGE MOOR	244,441	40,038	7,115	291,594	267,312	24,282	9%
5	5	PERDUE GEORGETOWN	147	192,852	-	192,999	327,477	(134,478)	-41%
7	6	NRG DOVER	117,124	-	-	117,124	151,011	(33,887)	-22%
9	7	FORMOSA PLASTICS	86,995	5	-	87,000	95,734	(8,733)	-9%
4	8	INVISTA	59,022	-	170	59,192	603,351	(544,159)	-90%
11	9	MOUNTAIRE FARMS OF DELAWARE	1,489	-	28,256	29,745	32,835	(3,090)	-9%
13	10	JUSTIN TANKS	16,680	-	-	16,680	23,953	(7,273)	-30%
14	11	CIBA	14,430	-	-	14,430	21,730	(7,300)	-34%
15	12	HIRSH INDUSTRIES	13,032	-	-	13,032	13,048	(16)	0%
12	13	SUNOCO	11,473	-	-	11,473	26,353	(14,880)	-56%
23	14	EVRAZ CLAYMONT STEEL	1,839	415	7,866	10,121	5,196	4,925	95%
18	15	HANOVER FOODS	10,001	-	-	10,001	10,758	(757)	-7%
		ALL OTHERS	44,638	18	0	44,656	104,908	(60,252)	-57%
		TOP 15	3,138,868	1,590,459	537,489	5,266,816	9,254,045	(3,987,229)	-43%
		STATE TOTALS, ALL FACILITIES	3,183,506	1,590,477	537,489	5,311,472	9,522,805	(4,211,333)	-44%

Source: 2008 and 2009 DNREC TRI Databases, October 2010

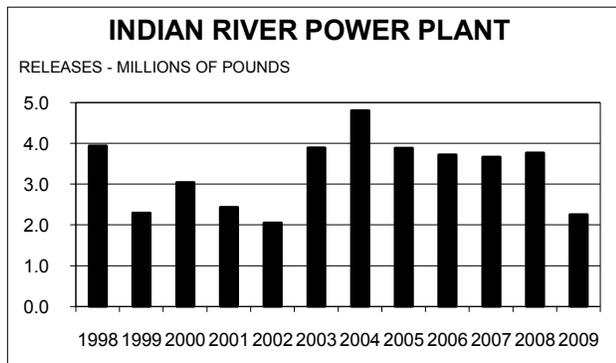
Moor and Evraz Claymont Steel) reported an increase in on-site releases, while 13 reported a decrease. Changes at the facility, such as the way releases are estimated, how waste is managed, changes in raw materials or processing methods, or installation of new or improved equipment possibly used to limit or eliminate releases of all or specific chemicals, may affect reported releases. Changes in production amounts may or may not affect releases from a facility. Details for some of these changes are provided on the following pages. Interested individuals are also encouraged to contact facilities (see Appendix B for contact information) and inquire as to the reasons why changes occurred.

The next several pages present a brief description of each of the top 15 facilities to provide an understanding of the use and importance of some of the TRI chemicals and basic operations at these facilities. As in Table 6, this rank for the 2009 reporting year is based on total reported on-site releases. The facility description explains the general types of products manufactured at the facility and how their TRI chemicals relate to the products and the overall plant operation. The graph included with the facility description shows the trend of the facility total on-site releases since 1998, the date of the last major TRI reporting revision. The graph for each facility includes all chemicals, including any newly reportable chemicals, which have been reported by the facility. Comparisons must be made carefully as **the scales on each of the facility graphs are different**. Appendix C provides a complete list of 2009 on-site release data grouped by facility and chemical.

The DNREC TRI program visits select facilities Statewide during the year to get a better understanding of operations at the facilities, to discuss TRI issues such as data quality that may have developed in the course of reporting, and to introduce new facilities and/or facility coordinators to the TRI program and its reporting requirements. Seven visits were conducted during the 2009 reporting year.

Although the TRI program itself has no limits for emissions, other DNREC and Federal programs do issue permits and limit emissions from operating facilities.

Rank #1 – NRG Indian River Power Plant – This 784 megawatt facility, located near Millsboro, produces electricity, primarily from the combustion of coal. Oil and coal-fired power plants were required to report under TRI for the first time for 1998. While ranked #1 in volume, the facility continues to install significant emissions reductions equipment and implement operating strategies. On-site releases at this facility decreased significantly by 40%, or 1,510,000 pounds, for 2009 compared to 2008. Production for 2009 was reported as 24% lower than for 2008.



The Indian River Plant reported on sixteen TRI chemicals for 2009. Eight of these were metal compounds, three were non-metallic PBTs, three were acid gases, and the remaining two were ammonia and naphthalene. All the compounds except ammonia are formed during the combustion process as a result of impurities within the coal and oil. Ammonia is a product of the nitrogen oxide emissions reduction process.

Beginning in 2003, actual stack sample data (as compared to the EPA emission factor methods) were used to calculate hydrochloric acid gas releases. These methods were applied to the entire year, and this resulted in significantly higher release amounts for hydrochloric acid gas from 2003 up to 2005. In 2005, coal analysis and emission factors were used to calculate the hydrochloric acid gas. This gave a more representative total release for the year because it represents all the data for the year, not just the data collected during a single stack test. Acid gasses, such as hydrochloric acid, sulfuric acid, and hydrofluoric acid, accounted for 76% of the facility's on-site releases in 2009.

Coal analysis data, emissions data, and emissions factors are used as a basis for calculating releases. Coal consumption increased 2.1% in 2007, 2.3% in 2008, but was lower by 24% in 2009 based on coal burn records. In addition, Indian River burned lower sulfur bituminous coal (25% lower typically) in 2008-2009, which contributed to lower TRI on-site release amounts of acid gasses. In 2008, reported releases to air of acid gasses decreased by 416,000 pounds (15%) and by another 1,107,000 pounds (40%) in 2009.

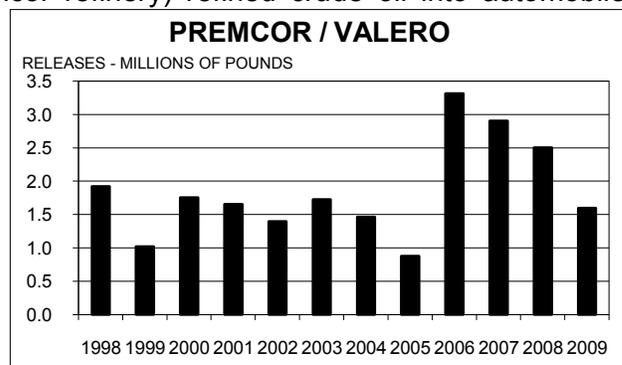
For 2009, all ash was disposed of in the on-site landfill. Total on-site release and off-site disposal of these metallic compounds decreased by 335,000 pounds (40%) compared to 2008. Metal compounds, formed as a result of impurities in the coal, are largely captured (99.7%) in the fly ash and bottom ash. Starting in 2004, coal analysis data and emissions data were used to calculate mercury and other metal compound values. In 2008, continuous mercury emission monitors were installed on the four units and were used for reporting the 2009 mercury amounts.

Activated Carbon Injection on all units captures mercury from the flue gas. The mercury is bound to the carbon particles, collected, and disposed of in the on-site landfill as an on-site release. Because of improved analysis and the carbon injection, these amounts are down significantly. On and off-site mercury releases and disposals decreased by 87 pounds (41%) to 127 pounds for 2009. These mercury release amounts had been reported in the range of 241-197 pounds for several years, and are also down from the 397 pounds reported in 2003.

Ammonia is released in the power production process solely from the use of urea, a pollution control agent used in Selective Non-Catalytic Reduction (SNCR) technology for reducing nitrogen oxides (NOx) by limiting the formation of oxides of nitrogen to the atmosphere. Ammonia release decreased 39,000 pounds in 2009, the result of a reduction in operating hours and continued system optimization at the plant.

Naphthalene is in the oil consumed at the facility.

Rank #2 – Premcor / Valero - The Valero Delaware City refinery, owned and operated by The Premcor Refinery Group Inc. (the Premcor refinery) refined crude oil into automobile gasoline, home heating oil, and a variety of other petroleum products. The Premcor refinery purchased the facility from Motiva Enterprises, L.L.C. in May 2004, and subsequently became a subsidiary of Valero Energy Corporation. The facility closed in November 2009. In June 2010, Petroplus Holdings purchased the refinery from Valero Energy Corporation and plans to restart the refinery in 2011.



The Premcor refinery reported on 39 TRI chemicals for 2009, down from 43 reported for 2008. The total facility-reported on-site releases decreased by 904,700 pounds (36%) in 2009, primarily the result of a 814,000-pound reduction in nitrate compounds release to water, a 52,600-pound reduction in sulfuric acid release to air, and an 18,000-pound reduction in ammonia release to air.

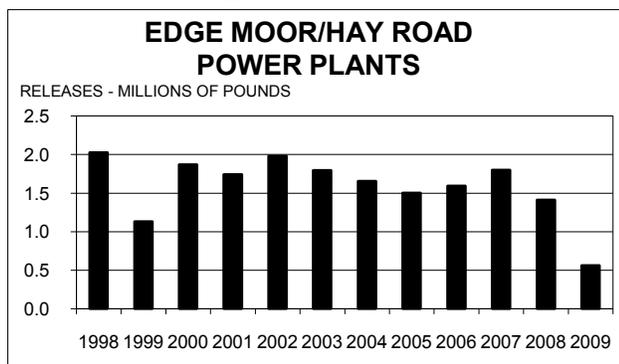
For 2006, reported releases of nitrate compounds increased to 2,745,000 pounds, up from 234,000 pounds reported in 2005. This increase was based on new analytical data and an improved methodology for calculation of annual releases. The reported decrease in nitrate compounds for 2007 reflected the use of new analytical data for reporting year 2007. Analytical data from samples taken monthly during 2009 were used to calculate the releases of nitrate compounds for reporting year 2009. Releases of nitrate compounds to water for 2009 were lower because of a lower average daily outfall flow and a lower concentration of nitrate compounds in the effluent.

Sulfuric acid releases to air have declined 39% since 2008 and 77% since 2003, due to a 21% reduction in crude oil processed, unit shutdowns, and to the addition of wet gas scrubbers (WGS) at the Fluid Catalytic Cracker and Fluid Coker units. Release of hydrochloric acid has decreased by over 99% since 2003, the result of the above volume reduction and unit shutdowns, and the installation of a hydrochloric acid wet gas scrubber (WGS) on the Continuous Catalytic Reformer unit.

Total on-site waste management amounts decreased by 16.5 million pounds (40%) for 2009. The majority of the decrease is due to decreases in amounts of carbonyl sulfide in the wet gas scrubber and ammonia in the stripper offgas stream recovered for energy in the Sulfur Recovery Unit. Also, decreases were seen in cyanide compounds and carbon disulfide recovered for energy in the Fluid Catalytic Cracking, Coking and Sulfur Recovery processes.

Off-site transfers decreased by over 45,000 pounds for 2009. The decrease is primarily due to cobalt compounds falling below the reporting threshold and a reduction in molybdenum trioxide sent off-site for recycle. These amounts were offset by increases in vanadium compounds sent off-site for disposal, and nickel compounds sent off-site for recycle and disposal. These metallic compounds are found in both the catalysts used and in slag produced during production of petrochemicals.

Rank #3 - Edge Moor/Hay Road Power Plants - Oil and coal-fired power plants were required to report under TRI for the first time for 1998. The Edge Moor/Hay Road facilities are located along the Delaware River a mile north of the Port of Wilmington and produce electricity from the combustion of coal, oil, and natural gas.



The Edge Moor/Hay Road power plants reported on thirteen TRI chemicals for 2009. These facilities reported three acid gasses, four metal compounds, three non-metallic PBTs, nitrate compounds, ethylene glycol, and ammonia. Acid gas emissions -- hydrochloric acid, hydrogen fluoride and sulfuric acid -- accounted for 98% of on-site releases.

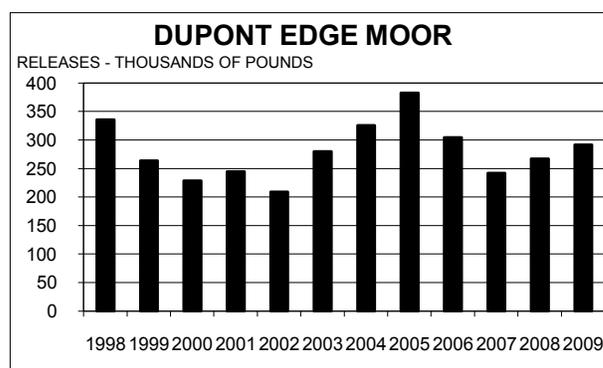
Electricity production at the facilities decreased 32% in 2009. Overall on-site releases decreased 60% compared to 2008 and are now at 28% of the facility's 1998 level. A portion of the decrease in on-site release amounts for hydrochloric, hydrogen fluoride, and sulfuric acid gasses was the result of a decrease in coal and oil use due to decreased electricity generation. Another significant portion of the decrease was the result of implementing sections of Delaware Regulation 1146 (see Appendix L for details), including the usage of dry sorbent injection (DSI) for reductions in sulfuric and hydrochloric acid gasses. Additionally, the activated carbon injection system was implemented to reduce mercury emissions.

All listed compounds except ammonia and ethylene glycol are formed during the combustion process because of impurities within the fuel. Ammonia is released from the Edge Moor facility solely from the use of urea, a pollution control agent used for limiting the formation of oxides of nitrogen to the atmosphere. Ammonia is also produced at the Hay Road facility from pollution control activities. Ethylene glycol is used for cooling purposes.

Over 95% of the metal compounds produced as a result of fuel combustion are largely captured in the fly ash and bottom ash and were not released, but disposed of in an off-site landfill. The remaining 5% of metals not captured in ash were released to air on-site (4%) and water (1%). On-site releases of metal compounds accounted for 0.64% of the facility total on-site releases.

Rank #4 - DuPont Edge Moor - The Edge Moor Plant is one of three domestic DuPont facilities that manufactures titanium dioxide, a white pigment that is used in the paint and paper industries. The facility also produces titanium tetrachloride and ferric chloride. The plant is located along the Delaware River a few miles north of the Port of Wilmington.

DuPont Edge Moor reported on 22 TRI chemicals for 2009. Production was higher by 5% in 2009, and total on-site releases increased by 9% compared to 2008. The on-site release of carbonyl sulfide increased by 19,000 pounds (9.7%) in 2009 as a result of the increased production, variable raw material composition, and process parameter variations. Carbonyl sulfide is a gas by-product of the titanium dioxide production process, and is produced from the use of sulfur-bearing coke in the process of manufacturing the titanium dioxide from titanium-rich ores. Release of manganese compounds to water increased by approximately 5%, consistent with an increase in production. Additionally, the annual manganese release can fluctuate with the sources of raw materials that the site utilizes.



Of the 22 reported TRI chemicals, carbonyl sulfide accounted for 73% of the facility total reported on-site release amounts, and manganese compounds accounted for 12%.

The term “dioxins” is used in this report to indicate a group of 17 dioxins and dioxin-like compounds (including furans) reportable to TRI, out of a family of several hundred dioxins and dioxin-like compounds. Among the “dioxins” included in TRI reports is the very toxic 2,3,7,8-TCDD dioxin, which is the congener generally of most concern, and most commonly covered by the news media. Toxicity levels of these 17 compounds vary greatly, and some compounds in this group have toxicity levels **3,000 times less** than the 2,3,7,8-TCDD dioxin. Because of this great variation, toxicity equivalent quantities (TEQ) are also calculated and presented in this report. Most (>99%) of the “dioxins” reported by DuPont Edge Moor are either a furan or dioxin of this lower toxicity level. The most toxic dioxins (2) were 0.12% (0.0034 grams) of all dioxin on-site releases reported by this facility. All TRI “dioxins” are reportable in grams and were converted to pounds for this report (1 gram = 0.002205 pounds).

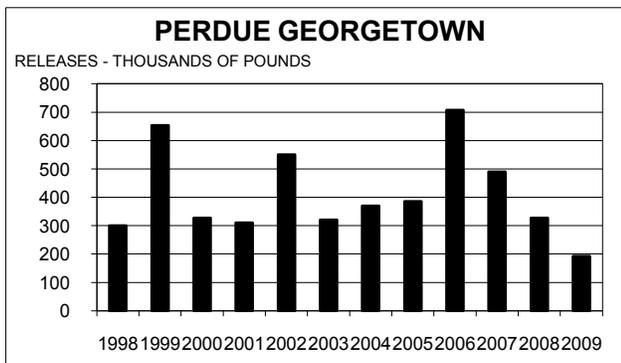
In 2002, DuPont announced a goal to reduce the generation rate of dioxin and dioxin-like compounds (DLCs) by 90% by the end of 2007 compared with 2001 levels. DuPont Edge Moor completed a major capital project in 2007 to provide these reductions. Through 2009, DuPont reduced by more than 99.9% the on-site release of DLCs compared to 2001 levels and reduced off-site transfer for disposal of these compounds from the Edge Moor facility by 98.6% by implementing the capital project and by making process modifications.

Over 99.7% (972.3 grams out of 975.2 grams generated) of the dioxins generated are contained within the solid material sent off-site. Of the remaining 0.3% dioxins that are released on-site, there was an increase for 2009 compared to the dioxins released for 2008.

The on-site release of DLCs (2.86 grams) increased by 2.27 grams in 2009 compared to 2008. This increase was mostly due to an increase of 2.25 grams released to water. The dioxins released to water were calculated based on a new sampling analysis completed in 2009 as required by the NPDES permit. Most (82.6%) of the DLCs released to water reported by DuPont Edge Moor are either a dioxin or furan of the lowest or next to lowest toxicity level.

DuPont Edge Moor also reported creosote releases to land in 2007-2009. Creosote was reported because the site exceeded the otherwise use threshold when it replaced approximately 1000 railroad ties that were treated with creosote in 2007, 335 ties in 2008, and 2,125 ties in 2009.

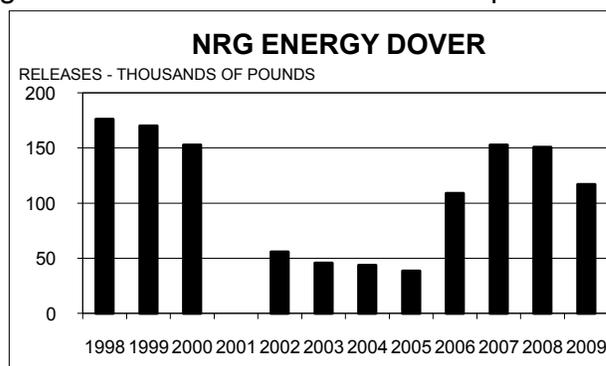
Rank #5 - Perdue Farms Georgetown - Perdue Farms is a producer of poultry products. The Georgetown facility processes chickens for sale to the retail market.



Perdue Georgetown reported on three TRI chemicals for 2009. Over 99.9% of the on-site releases were nitrate compounds. The Perdue wastewater treatment plant digests ammonia and production waste from the poultry processing plant’s wastewater stream and converts some of these wastes to nitrate compounds, which are discharged into a local stream.

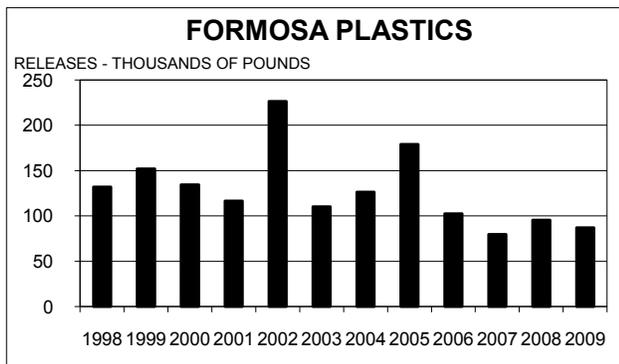
These reported on-site release amounts have varied in recent years because of changes in plant operation and in the way the amount of nitrate compounds released are estimated. In 2006, the reported amount increased as a result of optimization testing for the new NPDES permit. In 2007, the nitrate compound amount reported at the plant significantly decreased as a result of reduced nitrate concentrations, reduced wastewater amounts, and application of a more accurate factor for nitrate releases. In 2008, nitrate compounds continued to decrease as the wastewater system operations continued to improve through revisions to the original operational concepts and engineered design. In 2009, the reported nitrate compound amount declined by 41% compared to 2008 through ongoing review of and changes to operational controls, such as treatment times and amount of dissolved oxygen and biomass in the system. Since 2006, release of nitrate compounds to water has declined by 71%. Over the years covered by the graph, changes in production levels had little influence on the change in release amounts.

Rank #6 - NRG Dover Plant - Oil and coal-fired power plants were required to report under TRI for the first time for 1998. This facility, located on the West side of Dover, produces electricity primarily from the combustion of coal. The NRG Dover Plant reported on four TRI chemicals for 2009. Two of these were acid gases - hydrochloric acid and sulfuric acid – which are formed during the combustion process. Acid gas releases on-site accounted for over 99.9% of the facility on-site releases. Small amounts of metal compounds – mercury and lead compounds - are also formed during combustion because of metallic impurities in the coal. Of the lead compounds, 98% was captured in the fly ash and bottom ash and sent to an off-site landfill; and for mercury compounds, 17% was captured in the ash. The remaining 1.8 pounds of lead compounds and 7.1 pounds of mercury compounds were released on-site to air.



Although electricity production declined 24% in 2006, estimated release of hydrochloric acid increased to 100,000 pounds, a 213% increase over 2005. This increase was because of a change in coal suppliers in 2006, and analyses showed the new coal to have higher chlorine content than previously-fired coals. In 2007 electricity production increased 39% and on-site releases increased in proportion to this increase. In 2008, electricity production decreased 17% and on-site releases decreased slightly. For 2009, total on-site releases were lower by 22% compared to 2008 largely due to a 25% reduction in coal-fired electricity production and the reportable releases associated with it. For 2009, gas-fired electricity production increased by 47% compared to 2008, also reducing reportable releases.

Rank #7 - Formosa Plastics - Formosa Plastics, located in the Delaware City complex, produces polyvinyl chloride (PVC) resin for bulk sale to other industries that produce PVC based products, such as containers, flooring, carpet backing, upholstery, toys, and gloves. Formosa reported on three TRI chemicals for 2009. Vinyl acetate accounted for 37% of Formosa’s on-site releases for 2009. Vinyl acetate is also a raw material used in certain products and is released through the drying process.

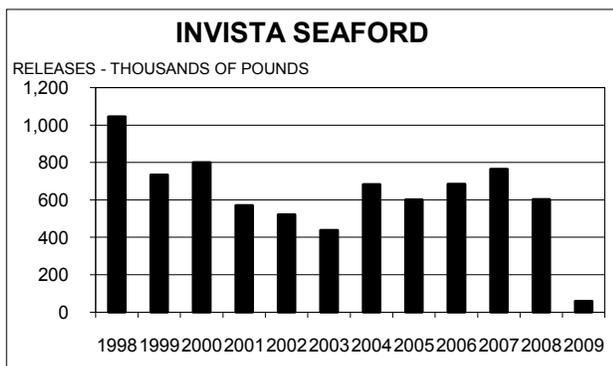


Vinyl chloride monomer (VCM) accounted for 50% of the facility on-site releases. VCM is the primary ingredient for producing PVC and is released as residual unreacted monomer during the drying process of the PVC resin. Permits regulate the concentration of the residual monomer in the PVC before drying. Ammonia is also used in several of Formosa's products and is released during the PVC drying process. Ammonia accounted for 13% of Formosa's on-site releases in 2009.

For 2009, total on-site releases were down 9%, and production was down 10% from the 2008 level. Reported release of vinyl acetate decreased 1% and vinyl chloride decreased 12.5%, while the ammonia release was 16% lower. Upgrades of the process control system resulted in improved efficiency, and operator training contributed to Formosa's emission reductions.

Rank #8 – INVISTA Seaford - This facility was the first plant worldwide to produce spun nylon fibers, beginning operations in 1939. INVISTA's Seaford site is located on approximately 648 acres adjacent to the Nanticoke River.

Principal products produced at INVISTA's Seaford site in 2009 include staple fiber for combat uniforms and chemical-resistant clothing for the U.S. military, staple fiber for tennis ball, pool table coverings, and gaming felts, and staple fiber for conveyer belts used in paper manufacturing. The manufacture of polymer and fiber for carpets was discontinued at the site in early 2009.



The INVISTA Seaford facility reported on six TRI chemicals for 2009. Total reported on-site releases decreased by 544,000 pounds (90 percent) from reporting year 2008. Of the six TRI chemicals reported, 99.7 percent of the on-site releases were hydrochloric acid aerosols released to air from the combustion of coal. The coal contained small amounts of chlorine-containing compounds which converted to hydrochloric acid aerosols during the combustion process. Combustion of coal in the INVISTA power facility was discontinued in April 2009, and the facility now burns only natural gas and #2 fuel oil. The Seaford facility's overall fuel usage also decreased in 2009 compared with the 2008 reporting year. As a result, hydrochloric acid aerosol releases decreased by 79 percent (221,000 lbs).

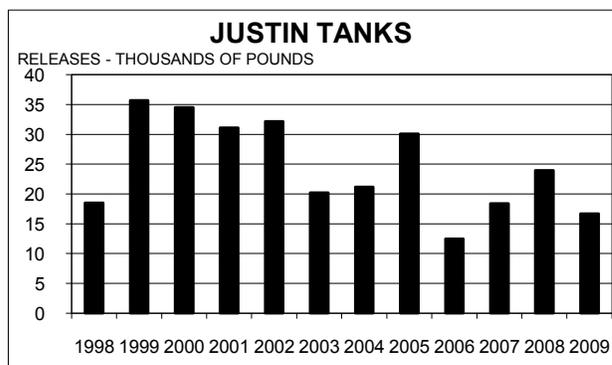
Not reported because of the fuel use reduction and a manufacturing production decline of 69 percent were: nitrate compounds, naphthalene, sodium nitrite and sulfuric acid. These chemicals are either no longer manufactured, processed, or otherwise used at the facility, or were below the reporting thresholds.

Rank #9 – Mountaire Farms of Delaware – This facility is located in Millsboro, and hatches chickens for growers, produces feed for poultry growers, and produces retail, wholesale and export chicken products. The predominant chemical release reported is ammonia. Total on-site release for 2009 was 29,745 pounds; of that, reported ammonia released was 29,743 pounds. Five percent of the on-site ammonia release was to air, and 95% (28,256 pounds) was to land. Ammonia is a byproduct of poultry processing and is treated in the on-site wastewater treatment plant. Due to changes in operations at the wastewater facility in 2008, an increase in ammonia in the treated wastewater effluent occurred and ammonia became reportable for 2008. This effluent is spray-irrigated on cropland, and the ammonia is utilized by the crops.

Before 2008, this facility had not reported to TRI since 2003. Since this is only the second year of TRI reporting for this facility since 2003, no trend is available. A trend will be provided in future years if reporting continues and when a meaningful range of data is available.

Rank #10 - Justin Tanks – Justin Tanks, located in Georgetown, manufactures a wide variety of Fiberglass Reinforced Plastic (FRP) tanks for use in the chemical, agricultural, and food industries.

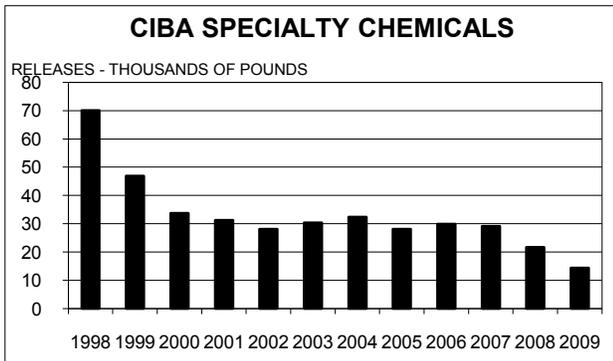
Justin reported on one TRI chemical, styrene, for 2009. Styrene is used as a monomer in the polymerization of fiberglass resin. The majority of the styrene is released to the air during the process of applying fiberglass reinforcement to the tank. During polymerization and curing, small amounts of styrene are released, and the amount of styrene release diminishes to zero at full cure. No release occurs after the tank polymerization and curing process is complete.



Following an increase of 30% in 2008, partially related to an increase in production, 2009 on-site releases decreased 7,273 pounds (30%) compared to 2008, the result of a 30% decrease in production.

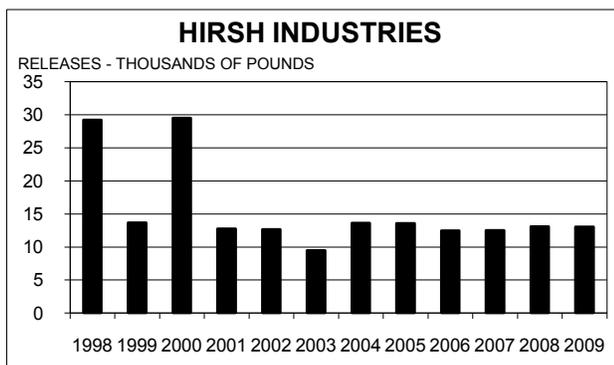
Rank #11 – BASF/Ciba – Ciba Corporation is a wholly owned subsidiary of BASF and transitioned to BASF in 2010. BASF/Ciba is located in Newport and manufactures pigments for the paints, plastic, and printing industries. They reported on eight TRI chemicals for 2009. All on-site releases were to air.

Methanol was the predominant chemical released on-site at BASF/Ciba in 2009 (94% of total on-site releases). Methanol is used as a reactant and a solvent in the pigment manufacturing process. About one-third of the 1.4 million pounds of methanol reported is recycled, about two-thirds is treated rather than released, and less than 1% is released to the on-site environment.



Total pigment production was down 36% in 2009, due to the economic slowdown, which resulted in a decrease of on-site releases by 34%. Ciba has expanded and modernized their facility since 1998. Although facility production is slightly higher than 1998 production, the facility has achieved a 79% reduction in on-site releases during this time. The facility has also reduced transfers of methanol to off-site water treatment by 89% since 1998.

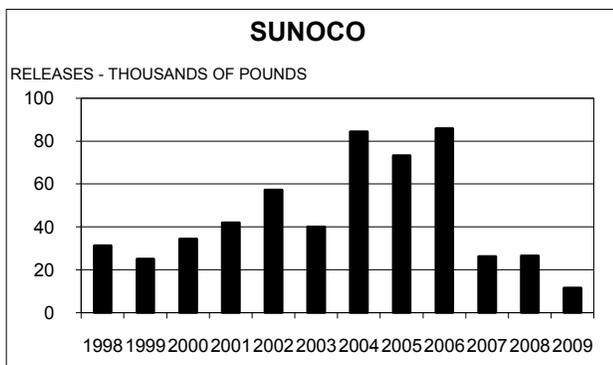
Rank #12 – Hirsh Industries – Hirsh Industries produces a line of consumer durables. These products include file cabinets, shelving units, and lateral filing systems. These items are used in home and office applications. Hirsh Industries is located in North Dover.



Hirsh reported one TRI chemical for 2009, certain glycol ethers. It is used as a component in the water based coatings for their painting process. The volume of production activities involving certain glycol ethers was unchanged in 2009 and on-site releases were also unchanged compared to 2008. Total on-site release is now at 45% of the 1998 amount.

Hirsh has been working with its vendors to formulate using lower volatile organic compounds (VOC) content in each of its coatings. Although the TRI-reportable glycol ether releases have remained constant, Hirsh's overall VOC emissions (non-TRI) have shown a reduction of over 50% of 2007 totals. (2007 VOC totals = 38.4 tons; 2009 VOC Totals = 18.9 tons).

Rank #13 – Sunoco Refining and Marketing – The Sunoco facility, located in Marcus Hook, PA, extends into the North Claymont area of Delaware. The Marcus Hook facility can process 180,000 barrels a day of crude oil into fuels – including gasoline, aviation fuel, heating oil, residual fuel, propane and butane, and petrochemicals. The major petrochemicals are benzene, toluene, xylene, cyclohexane, propylene, ethylene, and ethylene oxide; these are sold to chemical companies that use them to make a variety of other products.

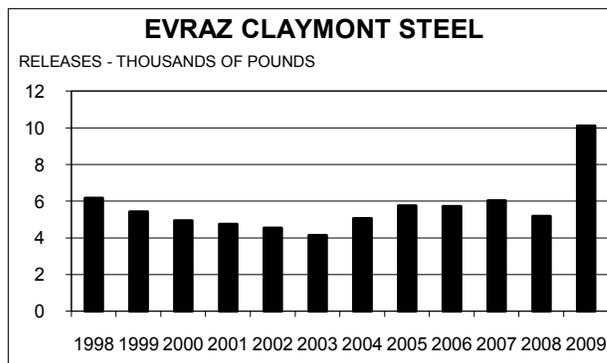


The portion of the Sunoco facility in Delaware reported six TRI chemicals for 2009. Ethylene and benzene accounted for 87% of the total on-site Delaware releases for 2009, and smaller amounts of ethylene oxide, toluene, n-hexane, and xylene were also reported as released to air from the process and tanks in Delaware.

For 2009, on-site releases decreased by 14,880 pounds. Benzene and ethylene releases decreased 2,400 and 13,200 pounds respectively, while n-hexane increased 800 pounds. The decrease in ethylene releases were due to sources in the ethylene complex being shut down after a May 2009 fire (see below). The decrease in benzene releases and the increase of n-hexane were a result of improved speciated emissions calculations.

After an explosion and fire in May 2009, Sunoco announced that the ethylene complex in the refinery would close due to insufficient demand for ethylene, ethylene oxide, and cyclohexane to justify the cost of repair and replacement of damaged equipment. This facility no longer has any TRI-reportable operations in Delaware.

Rank #14 – Evraz Claymont Steel - Located on a 425-acre site in Claymont, Evraz Claymont Steel, formerly known as CitiSteel, manufactures high strength, low alloy, carbon steel plate for heavy construction and industrial applications. The facility purchases and recycles up to 500,000 tons of scrap steel annually and melts it in an electric arc furnace, making this facility the largest metal recycler in the State of Delaware. The melted steel is cast into large slabs which are rolled into plates of thicknesses from 1/4” to 5-1/2”. The plates are sold throughout North America.



Evraz Claymont Steel reported on-site releases of eight TRI chemicals in 2009; seven metallic compounds and dioxin compounds. Most of the on-site releases, 78%, were to land. For 2009, on-site releases increased 95%. Manganese compounds was the largest on-site release, at 73% of the total. The increase in the 2008-09 total on-site release amount was due, in significant part, to the large increase (6,500 pounds) in manganese compounds released to land. This increase was caused by the use of more recent analytical data which indicated a higher concentration of manganese in the sediment under the on-site pond which stores water used to cool processed steel.

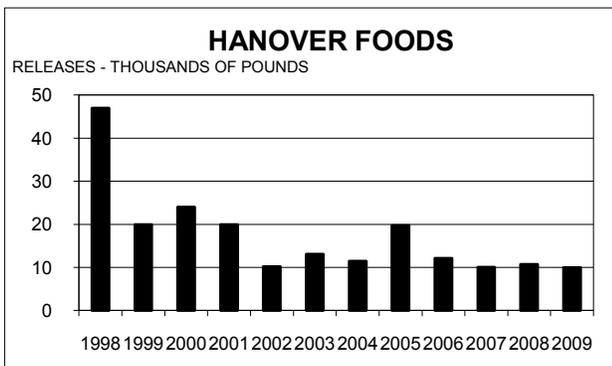
Some chemicals did show reductions in on-site releases. For 2009, reported mercury released on-site declined 184 pounds, or 76%, compared to reported levels for 2008. And, since 2005, reported mercury emissions have decreased by 84%. For 2009, lead compounds declined by 485 pounds, or 58%, and zinc compounds declined by 49%. Most of these reductions were reductions in releases to air. Zinc and lead releases declined because more recent analytical data indicated a lower concentration of zinc and lead in particulate emissions to the air. Mercury emissions declined because recent air sampling data indicated a lower mercury emission rate. In addition, releases of all three metals decreased because of a lower production rate in 2009.

In 2006, Evraz Claymont Steel implemented a comprehensive Mercury Source Reduction Program. In August 2006, as part of this program, Evraz Claymont Steel joined with other stakeholders and the EPA in announcing the EPA’s National Vehicle Mercury Switch Recovery Program. This program was designed to recover mercury switches used in lighting and braking systems in 2002 and older vehicles as they are being prepared for recycle. Mercury in

these switches can contaminate steel scrap destined for recycle, and a portion of this mercury can be released to air during the steel melting process. Although Evraz Claymont Steel does not prepare vehicles for recycle, the company has committed to purchasing shredded automobile scrap steel only from suppliers that are participating in the switch recovery program. The EPA program has now ended, but 6,984 pounds of mercury have been recovered from 3,174,345 switches collected throughout the nation. Most states are still accepting the recovered switches.

Recently, Evraz Claymont Steel reached agreement with DNREC to implement a multi-year series of improvements to dust collection at the facility. Implementing the related projects is expected to run through 2013, and will include improvements to several areas within the facility. These improvements are in addition to dust control projects which are already underway. Also included are air monitoring and enhancements to the facility's mercury pollution prevention program.

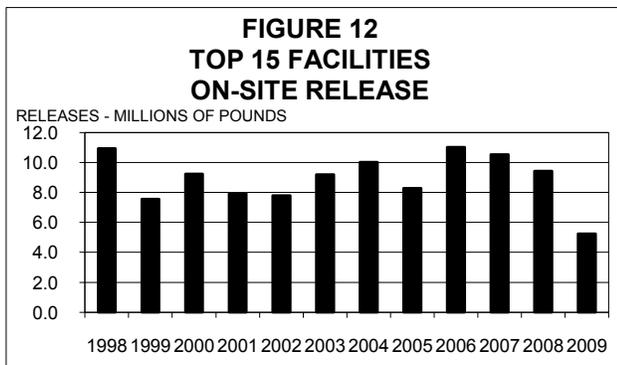
Rank #15 - Hanover Foods - Hanover Foods Corporation produces a variety of fresh, frozen, and canned vegetables, soups, refrigerated and frozen entrees, and snack foods. Customers for these products include the retail, foodservice, military, club store, and industrial markets.



The Hanover Foods facility located in Clayton freezes fresh vegetables including corn, peas, lima beans, spinach, and squash, and also prepares, freezes, and packages entrees. Hanover reported ammonia releases for the past several years. This was primarily due to leaks and other losses in their refrigeration equipment. In 1999, with the assistance of DNREC's Emergency Planning and Response Branch, a program to reduce ammonia releases was begun, and Hanover's on-site releases have

decreased by 79% since 1998. In recent years, the increase and decrease of ammonia releases generally reflect the level of production. In 2005, production increased 50%, but the reported ammonia release increased 72%, the result of normal leaks and losses, as well as filling the system to accommodate installation of additional equipment. In 2009, releases decreased 7%, in line with a similar production decrease.

Combined Top 15 Facilities Trend - Figure 12 shows the totals for reported on-site releases for the top 15 facilities during 1998-2009. The total on-site release trend for these 15 facilities



is down 43% since 2008. These facilities represent over 99% of the total on-site releases in the State for 2009, while the remaining 47 facilities represent less than 1%. Thirteen facilities of the top 15 facilities reported decreases in 2009. The largest was the 989,000-pound hydrochloric acid decrease at the Indian River Power Plant as a result of reduced production and implementing portions of Delaware Regulation 1146. Also, the Premcor refinery reported an 814,000-pound decrease in

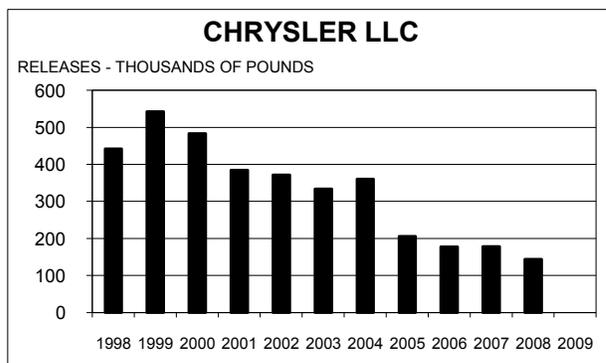
nitrate release because of reduced nitrate production. Two of the top 15 facilities reported increases in 2009; the largest was the 19,000-pound increase in release of carbonyl sulfide reported by DuPont Edge Moor. Evraz Claymont Steel reported several increases in releases to land from its steel plate manufacturing facility. All reportable chemicals are included without adjustment to the data shown on this graph, and on the ones above for the individual facilities.

Facilities No Longer Reporting to TRI

In the normal annual cycle of TRI reporting, facilities may fall below the reporting thresholds, and new facilities may need to start reporting. In recent years, this involved the annual loss of 3-4 facilities, and 1-2 new facilities started to report each year. For 2009, three large facilities closed and an additional four smaller facilities fell below the reporting thresholds, while one new facility started to report. The three closed facilities reported a total of 191,600 pounds of on-site releases for 2008, their last year of declining production, and an average of 605,200 pounds annually for 1998-2007. The facility profiles for the three closed facilities are shown below.

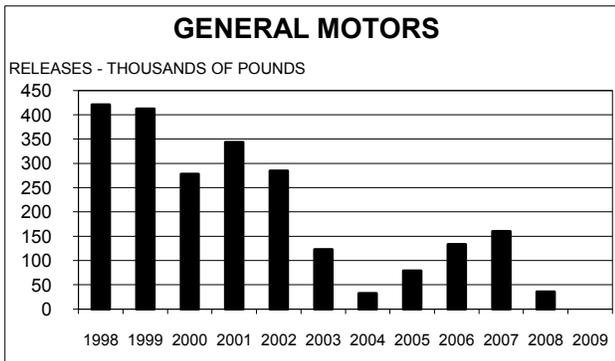
Rank #8 (2008) – Chrysler Newark Assembly Plant - Chrysler assembled the Dodge Durango and Chrysler Aspen SUV for distribution to dealers in 2008. This facility closed in December 2008 and was not required to report for 2009.

Chrysler reported on 14 TRI chemicals for 2008. All on-site releases were to the air. Many of these were solvents used in paints or for parts cleaning, while others were materials that are incorporated into the cars themselves, such as ethylene glycol (antifreeze) and n-hexane (gasoline).



The vehicle body coating process made use of 1,2,4-trimethylbenzene, certain glycol ethers, methyl isobutyl ketone, n-butyl alcohol, and xylene. Some of these materials were also used elsewhere in the facility. In total, these chemicals accounted for approximately 87% of the Chrysler on-site releases in 2008. Chrysler accounted for about 80% of certain glycol ethers and 62% of all xylene releases in the State in 2008.

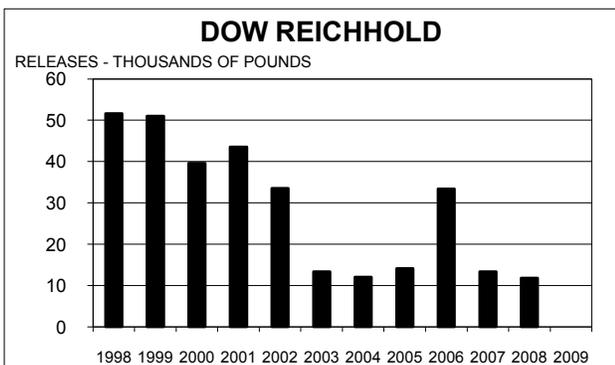
Rank #10 (2008) - General Motors Wilmington Assembly Plant - General Motors assembled Pontiac Solstice and Saturn Sky automobiles for distribution to dealers; the Opel GT for export to Europe; and the Daewoo G2X for export to Korea. The facility closed in 2009 and was not required to report.



During 2004-2005, the plant underwent a significant model change-over and production was curtailed, but some TRI chemicals remained in use for non-production cleaning and other changeover activities. In 2006, production re-started and releases of TRI chemicals increased in proportion to production, while non-production releases continued at a lower level. Production increased in 2007, but declined during 2008, and the facility closed in July 2009.

GM reported on nine TRI chemicals for 2008. Many of these are solvents (certain glycol ethers, n-butyl alcohol, xylene) used in paints or for parts cleaning, while others were materials that were incorporated into the cars themselves, such as ethylene glycol (antifreeze). Xylene, certain glycol ethers, and 1,2,4-trimethyl-benzene are paint solvents used in both the base and top coats and accounted for 75% of GM on-site releases in 2008. General Motors accounted for about 3% of certain glycol ethers, 27% of 1,2,4-trimethylbenzene, and 9% of all xylene releases in Delaware for 2008.

Rank #16 (2008) - Dow Reichhold – Dow Reichhold was located two miles south of Cheswold. Dow Reichhold produced emulsion polymers, sometimes referred to as latex.



These products are sold in bulk liquid form and are used in the manufacture of synthetic fuels, nitrile rubber gloves, textiles, and other specialty products. The facility stopped production in November 2008 and closed in 2009.

In 2006, a railcar containing styrene at the facility spontaneously polymerized, releasing styrene to the air, which caused a large increase in 2006. The railcar was not hooked up to any plant processes and no

fire or explosion occurred at the facility. There were no serious injuries at the facility or in the nearby community. As the facility prepared to close, it reported a 12% reduction in releases for 2008, while production declined 32% compared to 2007.

On-site release of 1,3 butadiene accounted for 31% of the total on-site production releases in 2008. Between 1998 and 2008, releases of 1,3 butadiene declined by 87%. Releases of acrylonitrile accounted for 18% of the 2008 on-site releases, and declined by 66% since 1998. Releases of styrene accounted for 12% of the total on-site production releases in 2008, and declined by 76% since 1998. Pollution control equipment processed the residual monomers and achieved 98.0-99.9% removal efficiency before releasing its exhaust to the air.

The facility is currently being dismantled.

Persistent Bioaccumulative Toxic (PBT) Chemicals, 2000-2009

For reporting year 2000 and beyond, the EPA established substantially lower reporting thresholds for 12 existing chemicals and one chemical category, which are highly persistent and bioaccumulative in the environment. Six new chemicals and one new category were also added to the PBT list for 2000. The new thresholds apply regardless of whether the PBT chemical is manufactured, processed, or otherwise used. Table 7 provides a current list of the PBT chemicals and their thresholds.

PBTs are receiving increased scrutiny as we learn more about them, and reporting of PBTs is being progressively more emphasized. These chemicals are of particular concern because they are not only toxic, but also because they remain in the environment for long periods of time, are not readily destroyed, and accumulate in body tissues. Beginning with reporting year 2001, the thresholds for lead and lead compounds were reduced to 100 pounds, down from the previous 25,000 pounds for manufactured and processed and 10,000 pounds for otherwise used, except lead contained in stainless steel, brass, or bronze alloys.

Beginning with reporting year 2008, additional toxicity information became available for dioxin and dioxin-like compounds (DLCs). The 17 compounds that fall under the category of DLCs have a wide range (1.0000 to 0.0003) of toxicity; these values are called the Toxic Equivalent Factor (TEF). In order to compare them on an equal toxicity basis, we multiply the TEF by the pounds reported to get the Toxic Equivalent Quantity (TEQ). These amounts are provided along with the original amount reported in pounds. See pages 33-35 for additional detail on dioxins.

**TABLE 7
PBT CHEMICALS AND
REPORTING THRESHOLDS
(pounds/year)**

Chemical or Chemical Category	Threshold (Pounds)	2009 REPORTS
Aldrin	100	0
Benzo[g,h,l]perylene	10	8
Chlorodane	10	0
Dioxin and dioxin-like compounds	0.1 grams	6
Heptachlor	10	0
Hexachlorobenzene	10	1
Isodrin	10	0
Lead *	100	3
Lead and lead compounds *	100	12
Mercury	10	2
Mercury compounds	10	7
Methoxychlor	100	0
Octachlorostyrene	10	1
Pendimethalin	100	0
Pentachlorobenzene	10	1
Polychlorinated biphenyls (PCBs)	10	1
Polycyclic aromatic compounds	100	12
Tetrabromobisphenol A	100	0
Toxaphene	10	0
Trifluralin	100	0

* Lower Threshold For 2001 Reports

TOTAL 54

Not all of the PBT chemicals released before 2001 were reportable, even though it is likely these chemicals were released at, or near, the current reported rate if the facility had no significant change in its operation. For example, 15 facilities reported lead or lead compounds in 2009, compared to seven in 2000. All but two of these facilities were in operation prior to 2001.

Table 8 shows the results of PBT reporting for 2007-2009 compared to total 2009 TRI data. The total of 54 PBT reports is lower than the counts of 60-63 for recent years. PBT on-site releases for 2009 comprise about 0.38% of the total TRI on-site releases. Total PBT wastes are about 4.6% of total TRI wastes.

TABLE 8
2009 TRI PBT DATA SUMMARY
(IN POUNDS)

	PBT's only 2007	PBT's only 2008	PBT's only 2009	All TRI Chemicals 2009
No. of Facilities	30	27	25	62
No. of Form As	4	NA	NA	29
No. of Form Rs	59	60	54	225
No. of Chemicals	11	11	11	90
On-Site Releases				
Air	4,172	3,716	1,568	3,183,506
Water	1,565	1,008	492	1,590,477
Land	15,270	28,948	18,052	537,489
On-Site Releases	21,008	33,673	20,112	5,311,472
Off-Site Transfers				
POTWs	5	4	2	636,602
Recycle	3,127,560	3,322,811	3,500,383	5,334,333
Energy Recovery	0	55	55	2,336,579
Treatment	9	0	0	140,248
Disposal	113,753	58,847	59,069	2,785,524
Total Transfers	3,241,328	3,381,717	3,559,509	11,233,287
On-Site Waste Mgmt.				
Recycle	3	3	3	5,630,119
Energy Recovery	0	0	0	14,670,034
Treatment	858	873	736	38,179,139
Total On-Site Mgmt.	861	876	739	58,479,292
Total Waste	3,263,196	3,416,266	3,580,360	75,024,050

PBT on-site releases were lower for 2009 by 13,561 pounds (40%); the decrease was almost entirely because of the reduced amounts of lead, lead compounds, and mercury compounds disposed of in the Indian River Power Plant and INVISTA on-site landfills, the reduced amounts released to air and water by the Edge Moor/Hay Road Power Plant, Dover Air Force Base, and Evraz Claymont Steel facilities. Since 2001, the trend of PBT on-site releases has been down 36%.

Total PBT wastes increased by 164,000 pounds (4.8%) in 2009, largely because of increased transfers to off-site recycle.

PBT reports could be filed on Form A under certain conditions for 2006-2007, but these conditions were revoked for 2008 and beyond. Four PBT reports were filed using Form A in 2007.

Table 9 shows the amounts of each PBT chemical reported as released by the TRI reporting facilities in 2009. Lead compounds, largely released from coal-fired power plants, made up 94% of the total on-site PBT releases.

TABLE 9
2009 PBT RELEASE SUMMARY
(REPORTED AMOUNTS IN POUNDS)

2009 PBT CHEMICAL	FORM R REPORTS	ON-SITE RELEASES				TRANSFERS OFF SITE	ON-SITE WASTE MGMT.
		TOTAL AIR	TOTAL WATER	TOTAL LAND	ON-SITE TOTAL		
BENZO(G,H,I)PERYLENE	8	149.58	4.01	0.00	153.59	0.60	404.00
DIOXIN AND DIOXIN-LIKE COMPOUNDS	6	0.0165	0.0062	0.0002	0.0229	2.1400	0.000761
HEXACHLOROBENZENE	1	0.1000	0.1000	0.0000	0.2000	52.2000	0.0000
LEAD	3	84.96	0.00	0.18	85.14	1,300.10	0.00
LEAD COMPOUNDS	12	985.21	473.55	17,459.00	18,917.76	3,541,039.29	0.00
MERCURY	2	0.0200	8.0282	0.0000	8.0482	16,015.79	0.00
MERCURY COMPOUNDS	7	181.60	1.00	57.00	239.60	99.69	0.00
OCTACHLOROSTYRENE	1	0.00	0.00	0.00	0.00	2.40	0.00
PENTACHLOROBENZENE	1	0.11	0.00	0.00	0.11	1.90	0.00
POLYCHLORINATED BIPHENYLS	1	0.0100	0.0000	0.0000	0.0100	5.10	0.00
POLYCYCLIC AROMATIC COMPOUNDS	12	166.82	5.04	535.82	707.68	989.81	334.66
TOTALS	54	1,568.43	491.74	18,052.00	20,112.16	3,559,509.02	738.66

Source: 2009 DNREC TRI Database, October 2010

Dioxins are reportable in grams and have been converted to pounds for this report.

Four decimal places are used where small amounts are not -0-.

The Edge Moor/Hay Road Power Plant reported the largest PBT release to air and water, and the Indian River Power Plant reported the largest release to land. Over 96% of the amounts transferred off-site for recycle was lead compounds from Johnson Controls. Additional detail for mercury and mercury compounds is on page 35.

The Premcor refinery reported almost the entire amount of on-site PBT chemical waste management with 372 pounds of benzo(g,h,i)perylene and 404 pounds of polycyclic aromatic compounds being treated on-site. Appendix I shows the PBT data detail, listing each PBT chemical and the facilities reporting on it. Also, see additional facility information in the Top 15 section starting on page 17 regarding reasons for changes in reports from other PBT-reporting facilities.

Dioxin and Dioxin-Like Compounds

The term “dioxins” is used by the EPA TRI program and in this report to indicate the group of 17 dioxins and dioxin-like compounds (DLCs) reportable to TRI, out of a family of several hundred dioxins and dioxin-like compounds, including furans. On May 10, 2007, the EPA Toxics Release Inventory Program issued a final rule expanding reporting requirements for the DLCs category. The final rule requires that, in addition to the total grams released for the entire category, facilities must report the quantity for each individual member for each release and waste management activity on a new Form (Schedule 1). The reporting requirements of the final rule applied to the 2008 reporting year and to following years.

The reason for this rule is that the toxicity levels of these 17 compounds vary greatly, and some compounds in this group have Toxic Equivalent Factors (TEF) **3,333 times less** than others. Because of this great variation, Toxicity Equivalent Quantities (TEQ) are a way to show toxic chemical amounts on an equal toxicity basis. The EPA and DNREC use the individual mass quantity data to calculate TEQ amounts (Weight X TEF = TEQ) that will be made available to the public along with the mass data. Table 10 below shows all 17 dioxins and dioxin-like compounds that are reportable to TRI and some basic information about them.

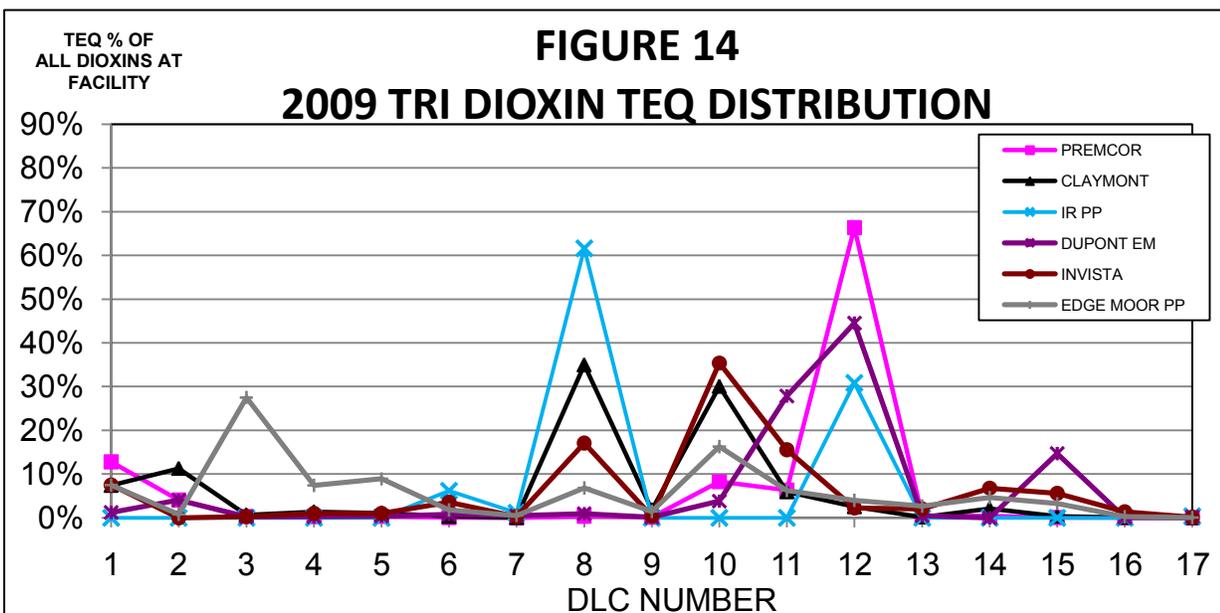
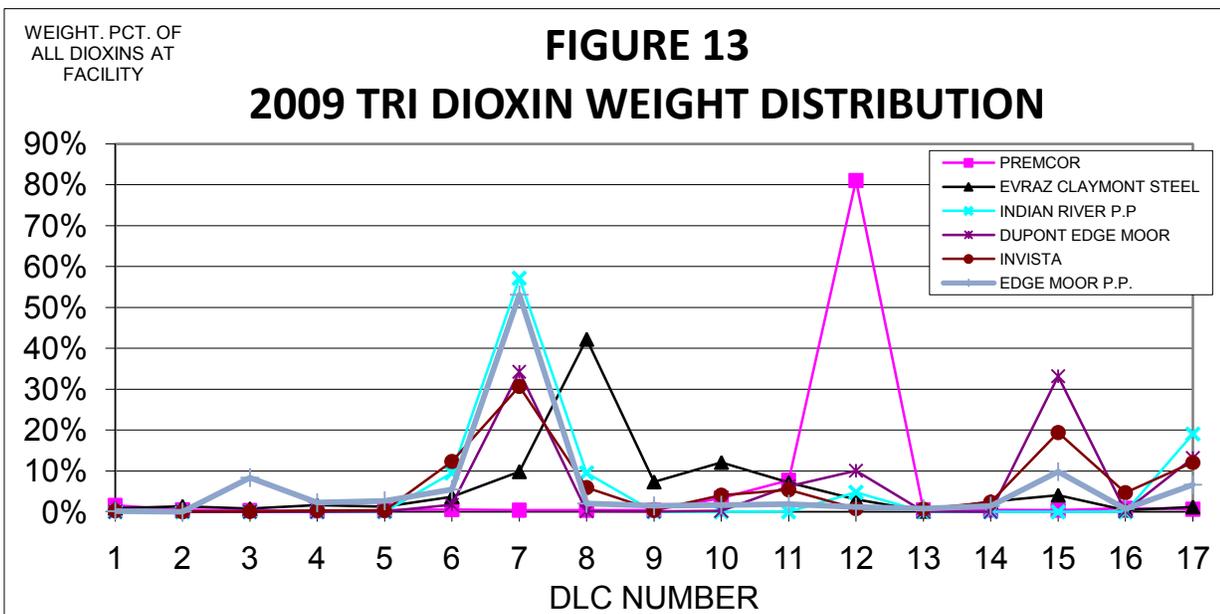
TABLE 10- DIOXIN TOXIC EQUIVALENT FACTORS (TEF)

TRI No.	Dioxin Chemical Name	Abbreviated Name	CAS	TEF
1	2,3,7,8-tetrachlorodibenzo-p-dioxin	2,3,7,8-TCDD	1746-01-6	1.0000
2	1,2,3,7,8-pentachlorodibenzo-p-dioxin	1,2,3,7,8-PeCDD	40321-76-4	1.0000
3	1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	0.1000
4	1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	0.1000
5	1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	0.1000
6	1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	0.0100
7	1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	1,2,3,4,6,7,8,9-OCDD	3268-87-9	0.0003
8	2,3,7,8-tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	0.1000
9	1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	0.0300
10	2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	0.3000
11	1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	0.1000
12	1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	0.1000
13	1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	0.1000
14	2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	0.1000
15	1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	0.0100
16	1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	0.0100
17	1,2,3,4,6,7,8,9-octachlorodibenzofuran	1,2,3,4,6,7,8,9-OCDF	39001-02-0	0.0003

Among the “dioxins” included in TRI reports is the very toxic 2,3,7,8-TCDD dioxin (#1 in Table 10 above), which is the congener generally of most concern, and most commonly covered by

the news media. All TRI “dioxins” are reportable in grams and were converted to pounds for this report since all other chemicals are reported in pounds (1 gram = 0.002205 pounds). You can see that TRI dioxin numbers 1 and 2 have the highest TEF (1.0000), and numbers 7 and 17 have the lowest (0.0003). This is a range of 3,333 to 1. In order to show the toxicity effects of the 17 dioxins on an equal basis, the amounts released in pounds are multiplied by their TEF. The resulting TEQ allows them to be compared on an equal toxicity level.

The graphs below show the distribution of the fractions of the 17 dioxin and dioxin-like compounds reported as on-site releases by each of the six facilities in Delaware that reported on dioxins. You can see how, because of the different processes at the facilities, the weight fractions of the 17 compounds reported vary between facilities.



Also, you can see how, for a dioxin like number 10, where the TEF is a relatively high 0.300, the TEQ amounts are greater than the weights. Conversely, for dioxin numbers 7 and 17, where the TEF values are 0.003, the TEQ amounts are smaller than their weights. This impact can be seen in Figures 13 and 14, where the Indian River Power Plant reported dioxin number 7 (TEF = 0.003) as 57% of the total weight, but this was only 1.1% of the TEQ.

The total on-site release amounts in pounds and their corresponding TEQ amounts reported in Delaware were calculated and are presented in the Table 11 below, in addition to the pounds released or managed as waste shown in Appendix I. This table provides a summary of information for the six facilities in Delaware that reported on dioxins for 2009. Because of the differences in distribution, the ranking changes when comparing by pounds or by TEQ.

**TABLE 11
FACILITIES SORTED BY DIOXIN ON-SITE TOXIC EQUIVALENT QUANTITY (TEQ)**

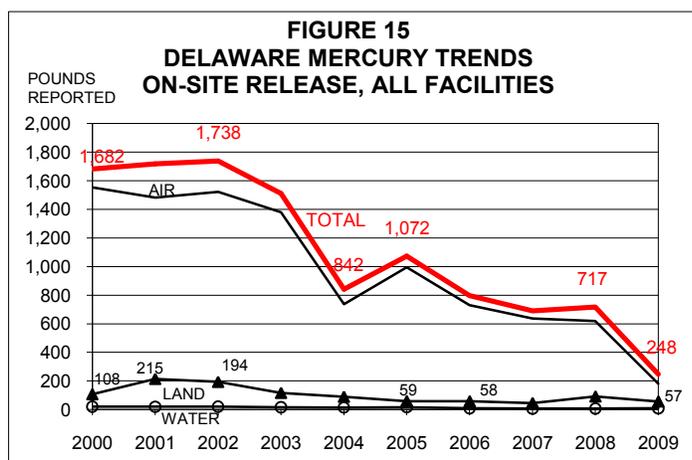
FACILITY	TOTAL ON-SITE TEQ, LBS.	ON-SITE TEQ RANK	TOTAL ON-SITE LBS. RELEASE	ON-SITE LBS. RANK
EVRAZ CLAYMONT STEEL	0.001498	1	0.012393	1
DUPONT EDGE MOOR	0.000142	2	0.006303	2
PREMCOR	0.000093	3	0.000761	4
EDGE MOOR/HAY ROAD POWER PLANTS	0.000082	4	0.002703	3
INVISTA SEAFORD	0.000009	5	0.000252	6
INDIAN RIVER POWER PLANT	0.000007	6	0.000463	5

For example, the Indian River Power Plant, #5 in on-site release **pounds**, is #6 in on-site release **TEQ** because of the relatively higher amounts of dioxin number 7 (TEF = 0.0003) reported, as compared to other facilities, which reported a lower percentage of release of this dioxin. The Premcor refinery, ranked #4 in on-site pounds, was ranked #3 TEQ, largely because the facility reported more of dioxin number 1 (TEF = 1.000) than any other facility.

Mercury and Mercury Compounds

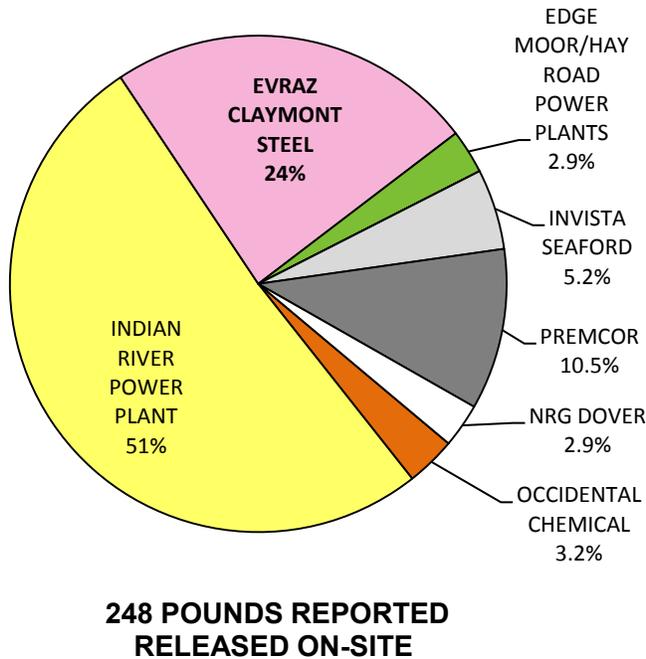
Mercury (elemental mercury) and mercury compounds are an important part of the PBT category, and this section discusses some of the data in these reports. Overall total mercury and mercury compounds on-site releases in Delaware for 2009 decreased by 469 pounds (65%) compared to 2008, and have decreased by 86% compared to the peak of 1,738 pounds reported for 2002.

Figure 15 shows the combined trend for mercury and mercury compounds. Significant reductions in on-site mercury releases were expected as a result of Delaware's Regulation 1146 (see page 48) starting in 2009, and these expectations are verified in the data. Additional reductions under this regulation are expected through 2012.



For reported on-site release amounts of **elemental mercury**, Occidental Chemical contributed virtually all 8 pounds released on-site in 2009 as the facility transitions through its chlor-alkali plant shutdown, down from a peak of 1,097 pounds reported in 2000. This amount will continue to decline as the facility completes the shutdown. A majority of elemental mercury (99.8%) transferred off-site in 2009 was for disposal from the closure of this facility. Occidental Chemical sent about 21 pounds of mercury off-site for recycle in 2009, following 540,000 pounds in 2005-6 and 2,000 pounds in 2008 as part of the shutdown activity starting November 2005.

**FIGURE 16
2009 ON-SITE MERCURY RELEASES
FROM DELAWARE FACILITIES**



Reports of on-site releases of mercury in **mercury compounds** by Delaware facilities decreased 471 pounds (66%) in 2009 from changes effecting significant reductions in releases at the power-producing facility operations and also from the Evraz Claymont Steel facility. Please see more detail in the Facility Profiles section, pages 17-29.

Figure 16 shows the percentage contributed by each of the facilities that reported a mercury or mercury compound release in 2009. Two facilities, Dentsply Caulk Lakeview and Intervet, were required to report because of mercury activity at these facilities, but did not report any on-site mercury releases for 2009. On-site release amounts for mercury and mercury compounds can also be found in Appendix F on page F-9 and Appendix I on page I-2.

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 that have been shown to cause cancer in animals. Table 11 contains those known and suspected carcinogens that were reported by Delaware facilities for 2009. Next to each chemical is its International Agency for Research on Cancer (IARC) rating as a: Known (1), Probable (2A), or Possible (2B) carcinogen. Polycyclic aromatic compounds is a class, or group of chemicals, with chemicals in both IARC 2A and 2B classifications. Of the 5.3 million pounds of TRI chemicals reported by facilities as released on-site to the environment in 2009, 3.3% (175,495 pounds) were known or suspected carcinogens. For additional information on cancer rates and causes, please go to the Department of Public Health cancer web site listed in the "For Further Information" section on page 55.

Carcinogens Trends, 1998-2009

Thirty-eight facilities reported on carcinogens for 2009, down from 43 for 2008. Releases on-site of all carcinogens decreased 43% (133,000 pounds) compared to 2008 data and have decreased 80% (681,400 pounds) since the peak in 1998. The number of carcinogen reports decreased by twenty to 76 in 2009, and the total number of reported carcinogenic chemicals decreased by three to 28 following a large increase in the number of lead and lead compounds reporting facilities in 2001 (because of the reduced reporting thresholds). Additional information on lead and lead compounds is in the PBT section on pages 31-33, and in Appendices I and J.

**TABLE 12
CARCINOGENS REPORTED BY
DELAWARE FACILITIES FOR 2009**

CHEMICAL NAME	IARC	NO. OF REPORTS
ARSENIC COMPOUNDS	1	3
BENZENE	1	3
CHROMIUM COMPOUNDS	1	4
ETHYLENE OXIDE	1	2
NICKEL COMPOUNDS	1	4
VINYL CHLORIDE	1	1
1,3-BUTADIENE	2A	1
4,4'-METHYLENEBIS(2-CHLOROANILINE)	2A	2
COBALT COMPOUNDS	2A	1
CREOSOTE	2A	1
POLYCHLORINATED BIPHENYLS	2A	1
POLYCYCLIC AROMATIC COMPOUNDS	2A	12
TRICHLOROETHYLENE	2A	1
DICHLOROMETHANE	2A,B	1
ETHYL ACRYLATE	2B	1
ETHYLBENZENE	2B	3
HEXACHLOROENZENE	2B	1
LEAD	2B	3
LEAD COMPOUNDS	2B	12
NAPHTHALENE	2B	6
NICKEL	2B	2
NITROBENZENE	2B	1
P-CHLOROANILINE	2B	1
PROPYLENE OXIDE	2B	1
STYRENE	2B	3
TETRACHLOROETHYLENE	2B	1
TOLUENE DIISOCYANATE (MIXED ISOMERS)	2B	3
VINYL ACETATE	2B	1
TOTAL =		76

Source: 2009 DNREC TRI Database, October 2010

Table 12 on the next page contains amounts not adjusted for changes in reporting requirements. In order to put the trend in uniform perspective, adjustments must be made for changes in reporting requirements during this period. The trends of both unadjusted and adjusted values are shown in Figure 17 on the next page. Chemical reports required during only a portion of the time period because of changes in reporting requirements have been

TABLE 13

1995-2009 TRI CARCINOGENS

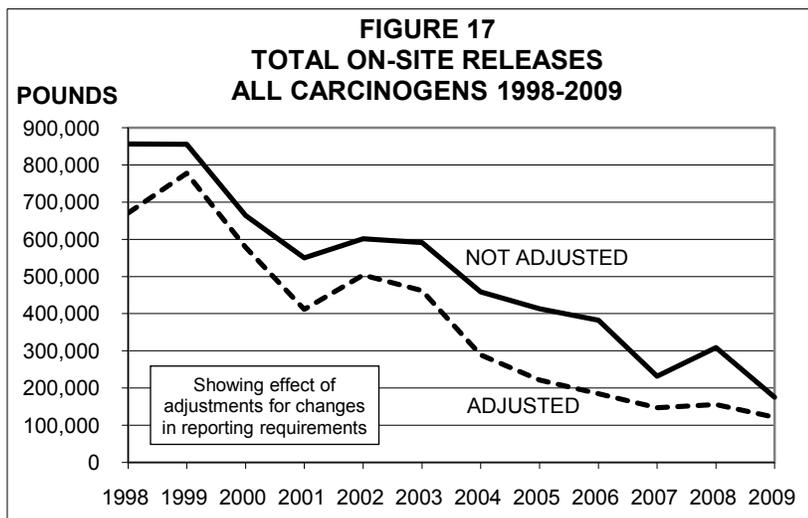
REPORTED ON-SITE RELEASES, NOT ADJUSTED

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
KNOWN												
AIR	209,094	219,970	209,828	209,295	177,473	123,191	96,562	98,107	66,475	56,287	69,781	60,664
WATER	10,246	3,048	4,395	9,114	9,682	9,339	9,817	4,643	5,222	6,435	4,452	2,059
LAND	363,793	306,630	258,008	169,197	170,074	312,576	173,414	134,194	143,115	46,021	104,112	26,843
KNOWN TOTAL	583,133	529,648	472,231	387,606	357,229	445,106	279,793	236,944	214,812	108,743	178,345	89,567
PROBABLE												
AIR	53,558	139,293	55,418	44,326	35,581	24,216	27,417	23,600	18,946	18,628	14,604	4,011
WATER	0	0	0	0	0	4	4	4	4	4	5	5
LAND	0	0	0	0	0	0	0	0	0	8,212	8,661	7,115
PROBABLE TOTAL	53,558	139,293	55,418	44,326	35,581	24,220	27,421	23,604	18,950	26,845	23,270	11,131
POSSIBLE												
AIR	167,420	186,506	135,946	91,851	189,296	98,699	99,543	104,480	102,414	70,722	77,436	56,817
WATER	1,175	290	271	4,873	2,109	1,431	2,308	3,416	1,544	1,655	1,170	522
LAND	51,625	142	40	21,607	17,475	21,714	49,266	44,500	44,251	24,005	28,203	17,459
POSSIBLE TOTAL	220,220	186,938	136,257	118,331	208,880	121,844	151,117	152,396	148,210	96,382	106,809	74,798
TOTAL AIR	430,072	545,769	401,192	345,472	402,350	246,106	223,522	226,188	187,836	145,637	161,821	121,492
TOTAL WATER	11,421	3,338	4,666	13,987	11,791	10,773	12,129	8,062	6,770	8,094	5,627	2,586
TOTAL LAND	415,418	306,772	258,048	190,804	187,549	334,290	222,680	178,694	187,366	78,238	140,976	51,417
GRAND TOTAL	856,911	855,879	663,906	550,263	601,690	591,169	458,331	412,943	381,972	231,970	308,424	175,495

Source: DNREC TRI 2009 Database, November 2010

excluded for the entire period in the adjusted trend.

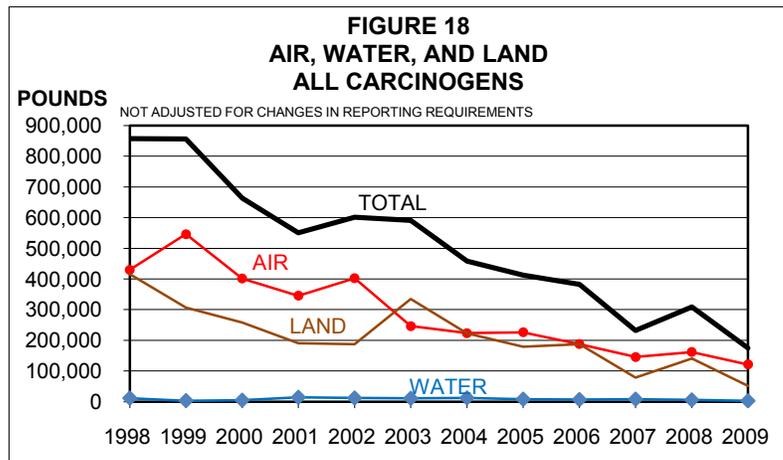
These adjustments involve some of the metallic compounds produced from impurities in the fuel and raw materials used by the facilities. Adjustments taking place in this period affected the air, water, and land release amounts. For example, new reports starting in 2001 for lead and lead compounds at their lower reporting thresholds accounted for 19,003 pounds of exclusions for 2009. Lead and lead compounds reports, under the previous higher thresholds,



were not excluded if the facility was already reporting them for 2000 or before. The primary reason for the decrease for 2009 is the 89,000-pound decrease in chromium, nickel, and lead compounds released or disposed of on-site at the Indian River Power Plant. Another 14,400 pounds of the decrease was from closed facilities Dow Reichhold and Chrysler. Other reductions were seen in the styrene (7,273 pounds) and vinyl

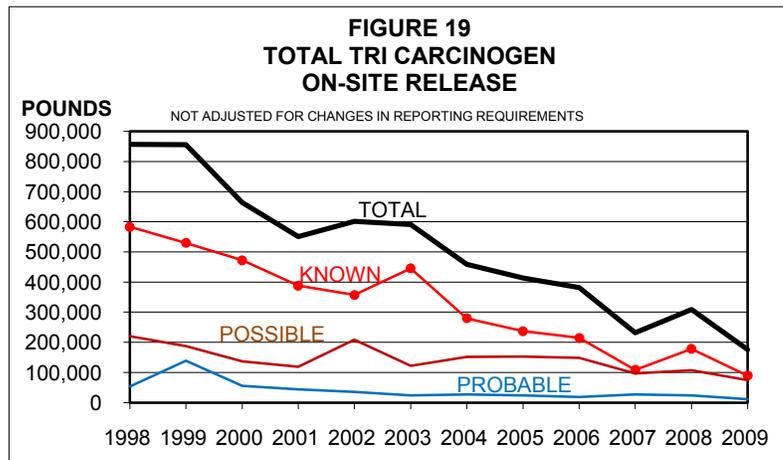
chloride (6,258 pounds) reports from Justin Tanks and Formosa plastics. Additional carcinogen detail is reported in Appendix J.

Figure 18 shows a trend of each of the media category releases and the total reported carcinogen release. As in Figure 17, the general trend has been down. Releases to air and land largely influence the total, depending on the year, while releases to water play a much smaller part.



Known Carcinogens

Figure 19 shows the trend of each of the three carcinogen groups and their effect on the total on-site release. On-site releases of known carcinogens are down 89,000 pounds (50%) since 2008, largely a result of declines in releases of chromium compounds in ash to on-site landfills at the Indian River Power Plant, and releases of vinyl chloride to air at Formosa Plastics.



About 68% of the total known carcinogen amount is reported released on-site to air, 30% to land, and 2% to water. Releases to air of known carcinogens are 50% of all carcinogen on-site releases to air, and 35% of all carcinogen releases. Reported releases to air of known carcinogens decreased by 13% in 2009 and are now at 29% of the amount reported in 1998. Vinyl chloride, with a total release to air of 43,800 pounds and only reported by Formosa Plastics, is highest in total releases to air in the known carcinogen category. Vinyl chloride contributed 72% of the known carcinogen category releases to air in 2009, 36% of all carcinogen releases to air and 25% of carcinogen total on-site releases to air, water, and land in 2009. Benzene releases to air, all from the Premcor refinery and Sunoco, have declined 76% from 58,000 pounds in 1995 (from the Premcor refinery and the now closed Metachem facility) to 13,870 pounds in 2009. Because of parallel reductions in releases to air of other known carcinogens, benzene made up 23% of the known carcinogen releases to air for 2009, and also in 1995.

Releases to land of known carcinogens are 52% of all carcinogen on-site releases to land. The primary known carcinogen released to land in 2009 was chromium compounds. Fuel combustion produces ash, which contains chromium compounds. Chromium compounds, 98% of which are released to land, are the highest amount of known carcinogen released to land, at 26,652 pounds. The Indian River Power Plant contributed over 99% of these chromium compound releases.

Nickel compounds, 68% of which are released to water (1,683 pounds), rank fourth in total on-site releases in the known carcinogen category at 2,481 pounds. The Premcor refinery reported almost all of the nickel compounds released for 2009. From 1997-2000, the release to on-site land reports of nickel compounds, a product of fuel combustion at the Premcor refinery, greatly influenced the values for known carcinogens. The amount reported in 1997 for this facility was 283,000 pounds. Now, most of the nickel compounds generated by this facility are transferred out-of-state for recycle and disposal. The amount of nickel compounds reported in these transfers off-site for 2009 was 27,881 pounds, 64% of which was recycled.

Releases to water on-site of known carcinogens were 2.3% of the known carcinogen total for 2009. Nickel compounds, mainly released to water from the Premcor refinery and the DuPont Edge Moor facility, contributed 82% (1,683 pounds) of all the known carcinogen releases to water (2,059 pounds), with chromium compounds contributing 14% (297 pounds).

Probable Carcinogens

The probable carcinogen on-site release total decreased by 12,139 pounds (52%) for 2008-2009 and is now at 11,131 pounds. Probable carcinogens are now at 21% of the 1998 amount. The majority (64%) of the 11,131 pounds of the six probable carcinogens was reported released to on-site land, while 36% was released to air during 2009. Although the largest releases to air were trichloroethylene reported by Camdel Metals and creosote reported by DuPont Edge Moor, these reports also contributed to the decrease in release amounts with reductions of 5,082 and 1,417 pounds, respectively. In addition, the closure of Dow Reichhold contributed 3,679 pounds of 1,3-butadiene and 1,965 pounds of formaldehyde to the reduction. The trend for trichloroethylene release decreased 5,082 pounds (68%) from 2008-2009 and has declined 92% from 1995-2009, down from 29,332 pounds in 1995 to 2,375 pounds in 2009. The trend for 1,3-butadiene, reported by the Premcor refinery and Dow Reichhold, is down 3,510 pounds (87%) for 2009 to 534 pounds, and is only 0.7% of the 72,439 pounds reported in 1995. Although the Premcor refinery reported an increase of 169 pounds, this was offset by the 3,679-pound reduction in the closure of Dow Reichhold.

Possible Carcinogens

About 76% of the total possible carcinogen amount is reported released on-site to air, 23% to land, and 0.7% to water. The trend for 2009 is down by 30%, or 32,011 pounds. The highest chemical release in this category is vinyl acetate at 31,943 pounds, all of which was reported released by Formosa Plastics. Vinyl acetate was reported as released to air by the Formosa Plastics facility, and decreased by 330 pounds for 2009. Lead compounds was the second highest on-site release of a possible carcinogen, with 18,918 pounds released on-site. The Indian River Power Plant reported the highest release, 17,251 pounds to land, followed by the Edge Moor/Hay Road Power Plants, reporting 335 pounds released to air and 330 pounds released to water.

Styrene is the third highest release in the possible carcinogen category. For 2009, Justin Tanks reported 16,680 pounds, down from 23,953 pounds for 2008, and 98% of the total styrene release for 2009. The top producers reporting for 2008 for styrene were Justin Tanks, Dow Reichhold, and The Marble Works. Reported styrene releases for 2009 declined by a total of 9,974 pounds. Dow Reichhold closed in 2008 and The Marble Works was not required to report for 2009.

Naphthalene is the fourth highest amount, with 3,085 pounds reported released on-site. All releases were to air, and 96% of the releases were from the Premcor refinery.

As before, in ***Limitations of TRI Data*** on Pages 4-5, we urge caution when using this data, as **this data does not indicate amount of human exposure.**

Discussion about specific facilities and their releases can be found on pages 17-28 in the Top 15 Facilities section.

Trend Analysis

Effect of Chemical and Facility Group Additions, 1990-2009

Significant groups of chemicals and facilities were added to the TRI program at two times:

- **Chemical List Changes - 1995**

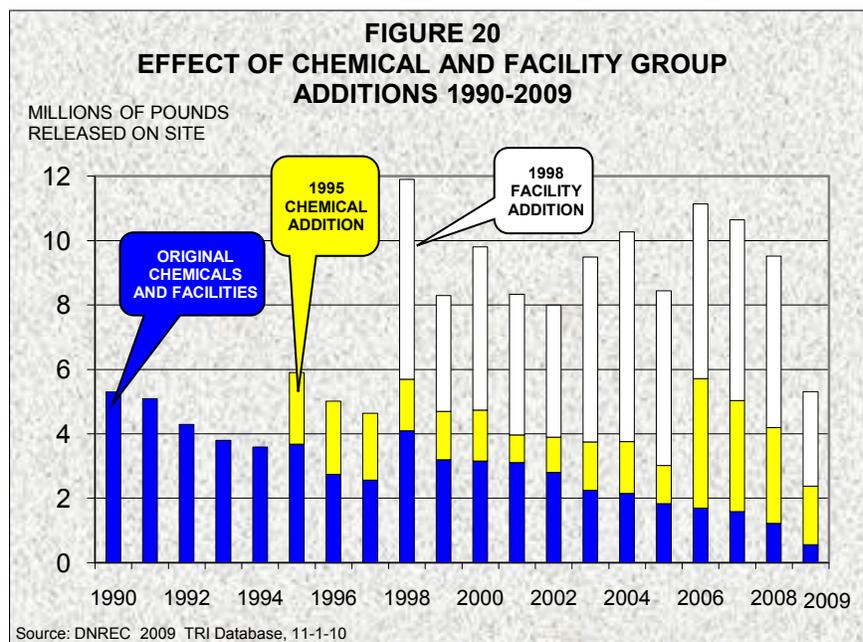
For reporting year 1995 and beyond, the EPA significantly expanded the list of chemicals. The list increased by 282 chemicals and chemical categories, added to the original list of 238 chemicals. Also during 1989-1995, other chemicals and categories were added or deleted, including chemical categories which are highly persistent and bioaccumulative in the environment (PBTs), bringing the total chemical count to 581 and the chemical category count to 30. See page 31 for details on the PBT chemical reports.

- **Industry Expansion - 1998**

Beginning with the 1998 reporting year, the EPA added seven industries to the list of facilities covered under TRI. Prior to the 1998 reporting year, only manufacturers (SIC codes 2000-3999) and Federal facilities were required to report (see Table 1 on page 3). The greatest impact to Delaware is the Electric Utilities (NAICS 221).

The industry expansion significantly increased the amount of reported releases. This did not necessarily represent an increase in toxic releases in Delaware, but rather provided additional information to the public. Other smaller groups, or even individual chemicals, were also added or deleted over this time. Figure 20 shows these effects starting in 1990 and following the trend of each group since it was added to the TRI program. Data from the beginning of the TRI program in 1987-89 is excluded because reporting requirements changed significantly and a valid comparison of this data with later data is not feasible.

The trend of each group and the reports affecting the trends will be discussed in the following areas of this Trend Analysis section. All groups show generally decreasing trends over time, with increases and decreases reflecting both changes in business conditions and improvements in analysis. The table on the next page shows the amount reported in millions of pounds for each group at the time it was added, the 2009 reported amount, and



the amount of change since the time it was added. If each group had remained constant at the time of its addition, amounts reported for 2009 would be 13.7 million pounds instead of the 5.31 million pounds actually reported for 2009. Because of several factors, including facility efforts to reduce pollution, increased regulation, and declining business conditions, the reporting facilities in Delaware have effected a reduction of 8.42 million pounds, or 61%, in their reported TRI chemical releases since 1990.

TABLE 14
TREND OF ON-SITE RELEASES FOR CHEMICAL AND FACILITY ADDITIONS

GROUP	STARTING YEAR AMOUNT Millions of Pounds	2009 AMOUNT Millions of Pounds	CHANGE SINCE STARTING Millions of Pounds	PERCENT CHANGE
Original Facilities and Chemicals	5.30	0.56	- 4.74	-89%
1995 Chemical Addition	2.23	1.82	- 0.41	-19%
1998 Facility Addition	6.20	2.93	- 3.27	-53%
TOTAL	13.73	5.31	- 8.42	-61%

Business conditions seem to have played an especially strong role in the 2009 declines in on-site releases, as the reported Production Indexes (P.I.) for most of the top 15 facilities were lower than for 2008. Only one facility reported a production increase, and the average P.I. for this group was 18% lower than for 2008. However, the top 15 facilities reduced their releases by 43%. Actual releases for the top 15 facilities were 5.27 million lbs., but the predicted release amount based on individual 2008 release amounts and 2009 P.I. was 7.14 million lbs., a 1.87 million lbs. difference; the P.I. itself may not be especially good at predicting current release amounts. Facility closings accounted for only 191,000 pounds of the change, so other factors, such as increased pollution control at the facilities, were at work in effecting the large reduction in TRI waste in general, and in on-site releases in particular. Production does not translate directly into releases, because some facilities may have releases during times of no production when pollution control systems such as wastewater treatment continue to operate. And, some facilities may be able to incrementally increase production with no increase in releases, because of increased pollution control efforts that occur at the same time.

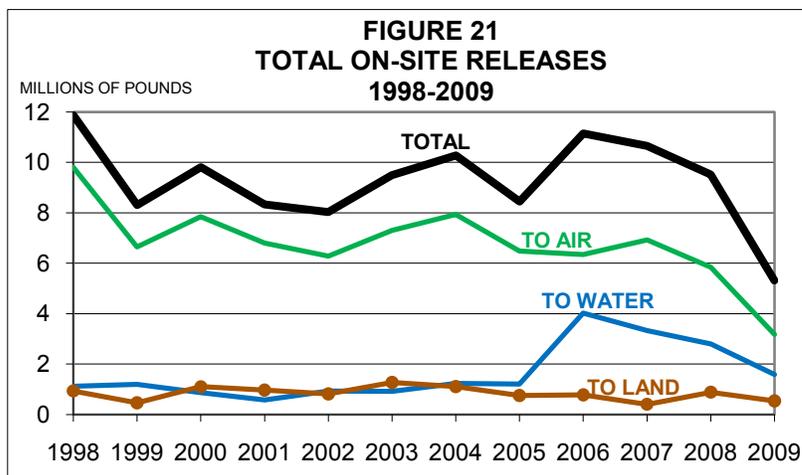
Release and Waste Management Trends, 1998-2009

TRI data is available back to 1987, the first year of the TRI program. Changes in reporting requirements over time have caused an increase both in the number of chemicals and in the number industries subject to reporting. As explained above and on page 5, significant changes to the TRI reporting requirements occurred in 1995, 1998 and 2000, when large increases in chemicals (1995), industries subject to reporting (1998), and reductions in PBT thresholds (2000) occurred. **This section shows all reporting results including these additions.** Comparison of this data with earlier data must be done carefully, as some chemicals and/or industries may not have been required to report over the entire time.

The analysis presented in this section uses 1998 as a base year for presenting trends for all reportable chemicals and facilities and is **not adjusted** for any changes in reporting requirements. Figure 21 on the next page shows the on-site release trends during 1998-2009, and Table 13 on the page 44 shows amounts reported for each of the last 12 years.

On-Site Releases, 1998-2009

On-site releases include emissions to the air, discharges to bodies of water, and releases at the facility to land, including on-site landfills. On-site release amounts decreased 44% (4,211,000 pounds) since 2008. Figure 21 shows the trend of on-site releases without adjustments. The trend begins in 1998 when the change in reporting requirements required that



a large number of new facilities start to report that year. Significant changes in the amounts reported for 2008-2009 include the facilities and chemicals shown in the table below. To put the changes in perspective for 2009, there were 41 reports with a higher amount, but 172 reports with a lower amount. There was one report with an increase greater than +10,000 pounds, but 31 reports with a decrease greater than -10,000 pounds.

**TABLE 15
REPORTS OF MAJOR CHANGES IN ON-SITE RELEASES**

FACILITY	CHEMICAL	MEDIA	CHANGE IN ON-SITE RELEASES (pounds)
Indian River Power Plant	Hydrochloric acid	Air	-989,000
Premcor Refinery	Nitrate compounds	Water	-814,000
Edge Moor/Hay Rd. Power Plants	Hydrochloric acid	Air	-766,000
INVISTA	Nitrate compounds	Water	-250,000
INVISTA	Hydrochloric acid	Air	-221,000
Indian River Power Plant	Barium compounds	Land	-185,000
Perdue Georgetown	Nitrate compounds	Water	-134,000
DuPont Edge Moor	Carbonyl sulfide	Air	+19,000

Some of these changes (higher or lower) like the changes in hydrochloric acid amounts may have been caused by normal year-to-year variations in production levels at the facility or in the chemical content of raw materials, or by the new Regulation 1146 which started to take effect in 2009. Some changes may also have been caused by improvements in the way facilities estimate amounts. Changes in the reports above are the primary reason for the large reduction in the totals for 2008-2009. Changes are also discussed in the Top 15 Facility Profiles and Facilities No Longer Reporting sections on pages 17-30. In addition, you may contact the facility (Appendix B) for a more in-depth discussion of the reasons for specific changes, and consult the appendices for the exact amounts that were reported.

TABLE 16
1998-2009 TRI DATA SUMMARY
(IN POUNDS)

NOT ADJUSTED FOR CHANGES IN REPORTING REQUIREMENTS

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
No. of Facilities	80	76	80	82	83	85	74	73	70	69	68	62
No of Form As	75	72	61	57	55	55	52	53	45	44	31	29
No of Form Rs	277	254	310	316	317	327	310	294	287	295	287	225
No. of Chemicals	106	101	109	104	106	103	103	103	101	102	100	90
On-Site Releases												
Air	9,796,431	6,651,166	7,841,017	6,796,684	6,281,850	7,308,283	7,935,921	6,478,578	6,341,764	6,920,245	5,840,142	3,183,506
Water	1,126,527	1,197,861	866,312	573,937	928,813	918,650	1,231,061	1,211,798	4,022,175	3,327,675	2,796,686	1,590,477
Land	937,708	462,579	1,103,632	965,666	814,385	1,268,396	1,111,392	752,894	781,701	406,188	885,976	537,489
Unadjusted On-Site Release	11,860,666	8,311,606	9,810,961	8,336,287	8,025,048	9,495,329	10,278,374	8,443,270	11,145,640	10,654,109	9,522,805	5,311,472
Off-Site Transfers												
POTWs	3,286,302	2,996,401	2,199,807	1,575,732	1,201,161	1,452,241	1,466,469	1,514,575	1,421,647	1,243,125	1,117,335	636,602
Recycle	12,002,926	9,295,315	8,649,678	8,845,326	9,248,730	8,376,865	9,910,935	11,345,835	8,534,537	8,181,423	7,535,327	5,334,333
Energy Recovery	1,491,543	1,389,936	2,543,840	2,642,626	2,538,090	2,834,075	2,755,903	2,724,080	4,180,596	4,910,600	3,707,411	2,336,579
Treatment	630,761	894,822	901,604	183,567	398,572	370,950	174,893	194,679	237,073	171,044	150,297	140,248
Disposal	3,983,506	3,056,466	3,816,862	3,878,689	4,196,691	4,084,899	3,919,638	4,400,538	4,739,232	7,145,314	3,129,281	2,785,524
Total Transfers	21,395,038	17,632,940	18,111,791	17,125,940	17,583,245	17,119,029	18,227,837	20,179,707	19,113,085	21,651,506	15,639,650	11,233,287
On-Site Waste Mgmt.												
Recycle	34,549,050	32,671,856	31,188,694	24,133,885	25,033,817	22,404,667	8,772,135	10,079,028	10,594,593	10,945,896	10,870,477	5,630,119
Energy Recovery	16,155,665	22,981,591	29,095,221	25,863,740	15,740,469	16,323,700	23,440,027	19,624,524	17,937,031	20,387,061	20,932,200	14,670,034
Treatment	68,475,327	69,501,151	64,404,879	40,734,134	33,392,650	30,443,585	31,807,455	38,330,991	39,516,068	39,879,302	42,281,742	38,179,139
Total On-Site Mgmt.	119,180,042	125,154,598	124,688,794	90,731,759	74,166,935	69,171,952	64,019,617	68,034,543	68,047,692	71,212,259	74,084,419	58,479,292
Total Waste	152,435,746	151,099,144	152,611,546	116,193,986	99,775,229	95,786,309	92,525,828	96,657,520	98,306,417	103,517,874	99,246,874	75,024,050

NOT ADJUSTED FOR CHANGES IN REPORTING REQUIREMENTS

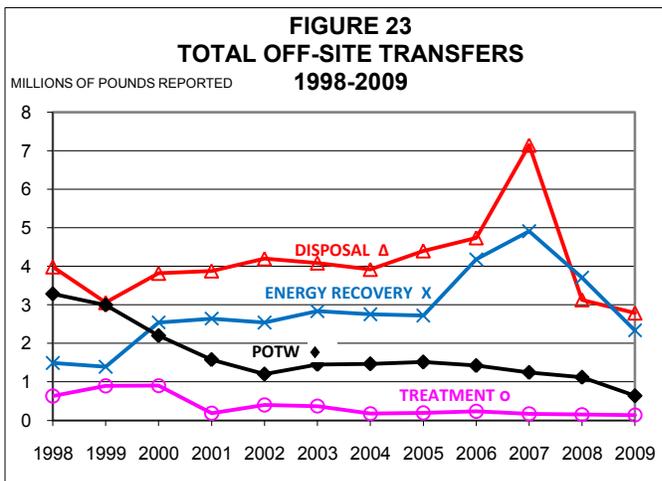
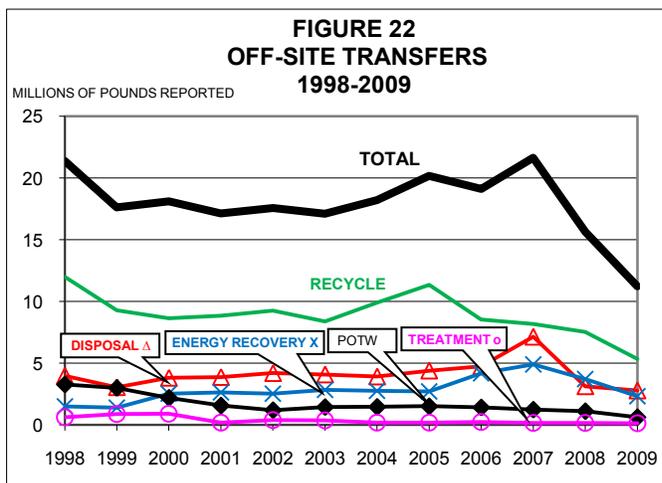
SOURCE: DNREC 2009 DATABASE, OCTOBER 2010



Off-Site Transfers, 1998-2009

An off-site transfer is a transfer of toxic chemicals in wastes to another facility that is physically separate from the reporting facility and may even be out-of-state. Chemicals are reported as transferred to an off-site facility when they are transported away from the reporting facility for the purposes of treatment at a publicly owned treatment works (POTW), recycle, disposal, energy recovery, or non-POTW treatment facility. Although the off-site transfers may be of less immediate local concern than on-site releases, the transfers to POTWs, treatment, and disposal still represent toxic chemicals in wastes that must be ultimately accounted for.

As noted on page 10 and in Table 13 on page 44, the amounts reported as transferred off-site are over two times greater than the amounts of on-site releases. Figures 22 and 23 show the trends in amounts of TRI chemicals in wastes transferred off-site for all facilities and chemicals reporting since 1998. To increase clarity, the lower portion (0 - 8 million pounds) of Figure 22 is expanded in Figure 23. For comparison, please look at the corresponding values in Table 13. Off-site transfers decreased 28% (4.4 million pounds) in 2009, driven by reductions in amounts sent off-site for recycle and energy recovery. As shown in the table below, decreases in recycled amounts were seen in reports from the BASF/Ciba facility for methanol, and from the Evraz Claymont Steel facility for zinc compounds. Decreases in off-site energy recovery amounts were driven by reduced amounts of toluene and reported by Noramco. A reduction in disposal amounts for manganese compounds was reported by the DuPont Edge Moor facility. These decreases were offset by an increase in disposal of chromium compounds reported by DuPont Edge Moor and an increase in energy recovery for n-butyl alcohol reported by Noramco. Forty-five facilities reported increases, while 119 reported decreases for 2009. Significant changes affecting the off-site transfer trends in 2009 are:

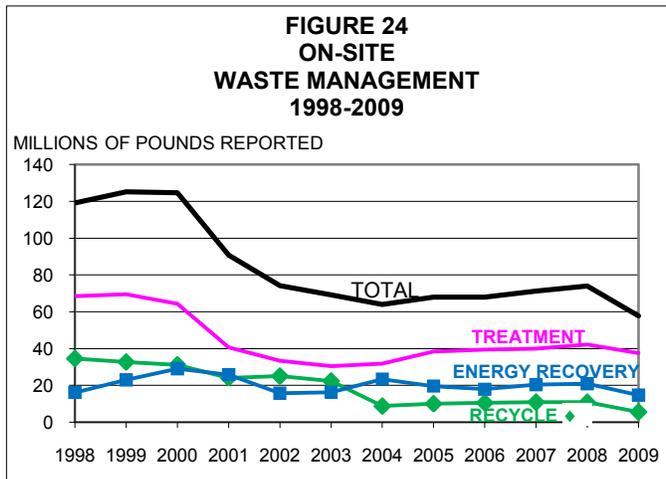


**TABLE 17
MAJOR CHANGES IN OFF-SITE TRANSFERS**

FACILITY	CHEMICAL	OFF-SITE METHOD	CHANGE (pounds)
BASF/Ciba	Methanol	Recycle	-1,141,000
Evraz Claymont Steel	Zinc Compounds	Recycle	-898,000
Noramco	Toluene	Energy Recovery	-840,000
DuPont Edge Moor	Manganese Cpds.	Disposal	-602,000
Noramco	N-Butyl Alcohol	Energy Recovery	+231,000
DuPont Edge Moor	Chromium Cpds.	Disposal	+341,000

On-Site Waste Management, 1998-2009

In some facilities, wastes are managed on-site instead of being sent off-site for processing or disposal. On-site waste management is the processing of chemicals in wastes that do not leave the site of the reporting facility. When chemicals are recycled, recovered for energy, or treated at the facility, they are reported as managed on-site. Although these amounts



represent a loss of raw materials and/or finished product to the facility as waste, they are not as much of a threat to the environment as the other on-site categories since these amounts are treated or recycled and not disposed of or released on-site. There is, of course, the risk that these chemicals may be released accidentally on-site to the environment during the waste management process. Also, most waste management operations are not 100% efficient, so a small portion of the waste being treated in these operations may be released on-site and must be

accounted for in the on-site releases reported by the treatment facility. Figure 24 shows the trends for the on-site waste management activities since 1998. The decrease (27%) in 2001 was due to several reported decreases, each of over one million pounds, including formaldehyde, methanol, MTBE, zinc compounds, and hydrochloric acid. Recent changes have been less dramatic, although the total on-site waste management amount did decrease by 15.6 million pounds, or 21%, for 2009, indicating that less waste is being generated by the reporting facilities.

Some significant changes reported in on-site waste management amounts for 2009 are:

**TABLE 18
MAJOR CHANGES IN ON-SITE WASTE MANAGEMENT**

FACILITY	CHEMICAL	ON-SITE WASTE MANAGEMENT METHOD	AMOUNT OF CHANGE (pounds)
Premcor Refinery	Carbonyl Sulfide	Treatment	-9,700,000
Premcor Refinery	Ammonia	Energy Recovery	-4,500,000
Rohm & Haas B2B3B8	N,N-dimethylformamide	Recycle	-1,700,000
Medal	Methanol	Recycle	-1,400,000
Indian River Power Plant	Ammonia	Treatment	+1,200,000
DuPont Edge Moor	Hydrochloric acid	Treatment	+5,300,000

These changes were balanced by smaller increases and decreases from other reports. Eighteen facilities reported an increase in a waste management amount, while seventy-two reported a decrease for 2009. Total pounds for on-site waste management decreased by 15.6 million pounds, or 21% since 2008, and have decreased by 61 million pounds, or 51%, since 1998. The on-site waste management amount totals are in Table 13 on page 44, and Figure 6 on page 11 shows the relative amounts.

Receiving TRI Chemicals in Wastes

When a facility transfers TRI chemical waste off-site, these wastes go to a receiving facility. Table 14 shows the total amounts of TRI chemicals reported as sent to Delaware facilities from TRI facilities, both in-state and out-of-state, for 2009. None of these receiving facilities in Delaware are required report to the TRI program based on the reporting requirements shown on pages 2-4. Historically, few TRI facilities in Delaware receive wastes from other TRI facilities. The DNREC TRI program does not receive reports from any out-of-state facilities that transfer wastes into Delaware. This data was obtained from the EPA.

TABLE 19
SUMMARY OF TRI TRANSFERS
TO DELAWARE FACILITIES
FROM OTHER TRI FACILITIES IN 2009
 (IN POUNDS)

DELAWARE RECEIVING FACILITY	TRANSFERS TO DELAWARE FROM DELAWARE TRI FACILITIES	TRANSFERS TO DELAWARE FROM OUT OF STATE TRI FACILITIES	TOTAL TRANSFERS RECEIVED BY DELAWARE FACILITIES
ASHWORKS, INC.	0	0	0
CLEAN EARTH OF NEW CASTLE	0	982	982
CORRADO AMERICAN	708	0	708
DELAWARE RECYCABLE PRODUCTS	2,076	0	2,076
DSWA CHERRY ISLAND LANDFILL	10,214	0	10,214
DSWA GEORGETOWN LANDFILL	7	0	7
DSWA SANDTOWN LANDFILL	514	0	514
DUPONT EXPERIMENTAL STATION	0	18,578	18,578
FCC ENVIRONMENTAL	27,869	50,766	78,635
INDIAN RIVER LANDFILL	6	0	6
INDUSTRIAL RESOURCE NETWORK	0	250	250
KENT COUNTY WASTEWATER TREATMENT PLANT	76,077	0	76,077
KENT SCRAP METAL	58,656	0	58,656
KROEGERS SALVAGE	0	1	1
MIDDLETOWN MATERIALS	145	0	145
NEW CASTLE WASTEWATER TREATMENT PLANT	45,069	0	45,069
PIGEON POINT LANDFILL	0	0	0
SEAFORD WASTEWATER TREATMENT PLANT	1,018	0	1,018
VFL TECHNOLOGY CORP.	34,452	13,174	47,626
WASTE MANAGEMENT NEW CASTLE	1,500	0	1,500
WILMINGTON WATERWATER TREATMENT PLANT	510,775	350	511,125
TOTAL TRI TRANSFERS REPORTED	769,086	84,102	853,188

Source: U.S. EPA 2009 Data Run, August 23, 2010

The top receiving facility is the Wilmington Wastewater Treatment Plant, receiving TRI chemicals in wastewater from regional customers. FCC Environmental in Wilmington received the second highest amount, from a variety of petrochemical and electric generating facilities. The Kent County Wastewater Treatment Plant (WWTP) received the third highest amount, from four facilities in the Kent County area. Kent Scrap Metal received the fourth largest amount, for recycle, from one Delaware customer. The fifth largest transfer amount was to VFL Technology Wilmington, receiving TRI chemicals for disposal from two electric generating facilities. The sixth largest transfer amount was to the New Castle WWTP, receiving chemicals from two Delaware facilities. These six receiving facilities accounted for 96% of all TRI chemicals received from in-state and out-of-state TRI facilities.

Pollution Prevention/Reduction Programs in Delaware

The Delaware Pollution Prevention Program in the Department of Natural Resources and Environmental Control (DNREC) facilitates the implementation of pollution prevention by industry, government and society. The Pollution Prevention Program (P2 Program) serves a non-regulatory function to provide information, technical assistance, training, and leadership on issues related to reducing and eliminating the generation of wastes and pollutants. The early years of the P2 Program concentrated on industry and its wastes. In recent years, the program has expanded efforts to schools, environmental, commercial and service organizations, and to State government, itself.

Data for TRI reportable chemicals and other chemicals is becoming increasingly more available to the public. This public awareness has focused attention on the existence and quantity of these chemicals and on their management and possible reduction. Although EPCRA does not require a facility to reduce releases of chemicals reportable under its programs, many companies and facilities are aware of the public availability of the data in this and other EPCRA reports and have implemented programs to reduce or eliminate releases of these chemicals. These programs may take the form of efficiency improvements, reuse, recycle, energy recovery, or material substitutions. The benefits of these programs are reduced raw material and waste disposal costs and reduced risks associated with the toxic chemicals. Also, these reductions demonstrate corporate responsibility to the facility's neighbors and improve the corporate image with the public.

There are numerous programs within DNREC that impact the management of TRI chemicals through the issuance of permits or through other regulatory and non-regulatory activities. Most releases reported under TRI are also regulated through air emission, water discharge, and/or land disposal permits. Potential sources of toxics undergo technical reviews through which potential threats to the environment and to human health are reviewed and identified prior to issuance of a permit. For example, the Engineering and Compliance Branch in the Air Quality Management Section enforces a provision in the Clean Air Act Amendment of 1990 that targets the control of hazardous air pollutants (HAPs). Nearly all HAPs are also reportable TRI chemicals. In addition, the Engineering and Compliance staff monitors TRI data to assess whether a facility complies with its Air Permits for TRI chemicals. Another example is the work performed by the Accidental Release Prevention (ARP) program. The ARP staff uses the TRI data to detect possible deficiencies at a facility that might result in an increased probability of an accidental release.

The Solid and Hazardous Waste Management Branch uses the TRI report to measure reductions of releases for the Waste Minimization Priority Chemicals list. The list is a result of EPA's Waste Minimization Program and has measurable goals that Delaware is working to attain. The DNREC P2 Program offers consultations to any generator of hazardous waste that requests it. The consultation is non-regulatory and non-enforcement in nature, and is aimed at helping the company to reduce any and all waste streams, including the priority chemicals.

During 2009, DNREC's Air Quality Management Section monitored ambient air quality at nine locations around the State. For more information, please refer to the For Further Information section under the [Delaware Air Quality Report](#) paragraph on page 55 of this report.

DNREC has developed a new "Multi-P" regulation (Regulation 1146) that is reducing air emissions from Delaware's coal and residual oil-fired power plants. The reason for the new regulation is to protect public health, safety, and welfare from pollutants which include nitrogen oxides (NOx), sulfur oxides (SOx), and mercury. A review committee made up of DNREC

personnel, persons with environmental interests, persons impacted by the emissions from power plants, and power plant owners and operators assisted with the development of the regulation. The reduction in NO_x, SO₂, and mercury emissions is:

1. Reducing the impact of those emissions on public health;
2. Aiding in Delaware's attainment of the State and National Ambient Air Quality Standard (NAAQS) for ground level ozone and fine particulate matter;
3. Helping to address local scale fine particulate and mercury problems attributable to coal and residual oil-fired electric generating units;
4. Satisfying Delaware's obligations under the Clean Air Mercury Rule (CAMR); and,
5. Improving visibility and helping to satisfy Delaware's EGU-related regional haze obligations.

NATIONAL PERSPECTIVE

The national 2009 TRI report has not been released by the EPA as of the writing of this report. However, placing the 2009 Delaware reports alongside the 2008 EPA reports yields some rankings that provide a perspective for Delaware in the national TRI picture. Changes in the 2009 national values may change these rankings.

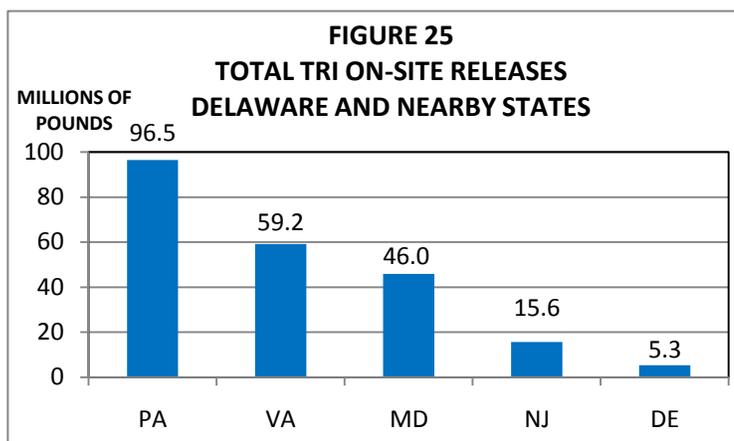
This data shows that Delaware ranks 44th in the nation in total on-site releases by state for all TRI chemicals. This is 0.16% of the total on-site release amounts nationwide. Rankings can also be based on other criteria. Because Delaware has a small population and area, releases are spread over fewer people and a smaller area, increasing the ranking on a per-person or per-square mile basis.

**TABLE 20
RANKING OF ON-SITE RELEASES FOR SELECT STATES**

State	Rank, Based on Pounds	Total On-Site Release (Pounds)	Rank, Based on Release Per Person	Rank, Based on Pounds Release Per Square Mile
Alaska	1	567,550,644	1	23
Utah	2	212,366,429	2	6
Nevada	3	200,474,858	3	11
Texas	4	183,986,680	30	28
Delaware	45	5,311,472	35	8

The reported totals for eight states were each over 100 million pounds in 2008.

Figure 25 shows the magnitude of TRI on-site releases reported by neighboring states. This figure shows the amounts of on-site releases reported by four nearby states for 2008, the latest year for which state totals are available, and for Delaware for 2009. Pennsylvania reported an amount of 96,544,465 pounds of TRI chemicals released on-site for 2008.



For on-site releases, 89 individual facilities in the nation each released more than all the facilities in Delaware combined.

TABLE 21
SELECT FACILITY TOTAL ON-SITE RELEASES COMPARED TO DELAWARE

Facility, State	Rank	Total On-Site Release (Pounds)
Red Dog Operations, Alaska	1	517,196,562
Kennecott Copper Mine, Utah	2	166,441,660
Newmont Copper Canyon Mine, Nevada	3	52,611,419
All Facilities Combined, Delaware	90	5,311,472

Fifteen facilities each reported over 20 million pounds released on site in 2008.

For on-site release of **dioxins***, Delaware ranked 35th in the nation.

TABLE 22
COMPARISON OF DIOXIN ON-SITE RELEASE TOTALS FOR SELECT STATES

State	Rank	Total On-Site Release (Grams)
Michigan	1	7,148.73
Utah	2	4,372.70
Texas	3	3,429.49
Delaware	35	10.38

The reported totals for each of fifteen states were over 100 grams released on-site in 2008.

* See pages 3, 5, 22, 27, 31-35 for notes on "Dioxins." The amounts reported do not differentiate between the highly toxic and the less toxic dioxins and dioxin-like compounds in this group.

Forty-three facilities each released more **dioxins* on-site** than all the facilities in Delaware combined.

TABLE 23
COMPARISON OF DIOXIN TOTALS FOR SELECT FACILITIES TO DELAWARE

Facility, State	Rank	Total On-Site Dioxin Release (Grams)
Dow Chemical, Michigan	1	7,113.94.53
US Magnesium, Utah	2	4,336.02
Dow Chemical, Texas	3	3,269.39
Delaware, All Facilities Combined	44	10.38

Nineteen facilities each reported over 60 grams of **dioxins*** released on site in 2008, and four of these released over 1,000 grams. See pages 3, 5, 22, 27, 31-35 for notes on "Dioxins."

Six states had more total production of dioxins than Delaware, although Delaware did rank #35 for on-site release of dioxins. See table at the bottom of page 49.

TABLE 24
COMPARISON OF DIOXIN TOTAL PRODUCTION FOR SELECT STATES

State	Rank	Total Production of Dioxins, Grams	Off-Site Transfer of Dioxins, Grams	On-Site Dioxin Release or Disposal - Grams (State Rank)
Texas	1	9,488.02	6,058.53	3,429.49 (3)
Michigan	2	7,239.03	90.30	7,148.73 (1)
Utah	3	4,405.51	32.81	4,372.70 (2)
Delaware	7	983.00	972.28 *	10.38 (35)

* This amount ranks Delaware #3 in off-site transfers by state. Delaware dioxin total production was #7 for 2009, largely based on the report from the DuPont Edge Moor facility. Almost this entire amount was transferred off-site to a permitted out-of-state landfill. For more information, read the facility profile on pages 21-22.

Some facilities in Delaware do rank near the top of the national rankings for specific releases. The **DuPont Edge Moor** facility ranks #3 for off-site transfer to disposal of dioxin and dioxin-like compounds, #6 for off-site transfer of chromium compounds and #7 for off-site transfer to disposal of manganese compounds. **Evraz Claymont Steel** ranks #71 for on-site release of dioxins. **DuPont Edge Moor** ranks #19 for on-site release of carbonyl sulfide. **The Premcor refinery** ranks #7 for all on-site releases for petroleum facilities (NAICS 324), #47 for all U.S. facilities in release of nitrate compounds, #40 for release of cyanide compounds, and #52 for on-site release of propylene. **Formosa Plastics** ranks #2 for on-site release of vinyl chloride and #18 for on-site release of vinyl acetate.

The **Indian River Power Plant** ranks #70 for 2009, down from #38 for 2008, for on-site release of hydrochloric acid. **Delaware** is ranked #24 for 2009, down from #19 for 2008, in the state rankings for on-site release of hydrochloric acid. The **Indian River Power Plant** ranked #65 for 2008, but was well outside the top 100 for 2009 within the coal and oil-fired electric generating facilities group (NAICS 2211) for total on-site release of all TRI chemicals

Occidental Chemical, closed as of November 2005, no longer ranks in the top 100 for on-site release of mercury. As the facility works through closure, it was #4 in the nation for total off-site disposal of elemental mercury for 2009. **Delaware** ranks #45 within the states for on-site release of mercury and mercury compounds for 2009, down from #41 for 2008. No Delaware facility is in the top 100 for on-site release of mercury compounds.

Again, these comparisons are made using the 2009 Delaware TRI data and the 2008 National TRI data, so comparison with the 2009 national amounts may change these rankings.

Nearby Facilities in Adjacent States

Some facilities, although not in Delaware, may be important to the environment in Delaware. These facilities are located near our border and may release TRI chemicals, particularly to the air or water, which may migrate into Delaware. Below is a listing of some nearby facilities with significant TRI release amounts. This data is from the EPA's TRI Electronic Facility Data Release (e-FDR) database using the 2009 reporting year data.

TABLE 25
On-Site Releases From Nearby Facilities in Adjacent States

Facility	State	Chemical	Media	Amount (Pounds)
DuPont Chambers Works, Deepwater	New Jersey	Nitrate Compounds	Water	3,211,000 **
DuPont Chambers Works, Deepwater	New Jersey	Sodium Nitrite	Water	64,300 ***
DuPont Chambers Works, Deepwater	New Jersey	Creosote	Land	30,300 **
National Refrigeration, Rosenhayn	New Jersey	HCFC-22	Air	355,000 ***
Valero, Paulsboro	New Jersey	Benzene	Air	15,400 **
Valero, Paulsboro	New Jersey	Hydrogen Cyanide	Air	263,000 **
Sunoco, Gloucester	New Jersey	Cyanide Compounds	Air	172,398 **

Table 25 Continued

Facility	State	Chemical	Media	Amount (Pounds)
Sunoco, Philadelphia	Pennsylvania	Hydrogen Cyanide	Air	152,000 **
Sunoco, Philadelphia	Pennsylvania	N-hexane	Air	36,100 **
Sunoco, Philadelphia	Pennsylvania	Phenol	Air	50,400 **
Sunoco, Philadelphia	Pennsylvania	Cumene	Air	69,700 **
Sunoco, Philadelphia	Pennsylvania	Benzene	Air	91,200 **
Arkema, Bristol	Pennsylvania	Methyl methacrylate	Air	33,200 **
RR Donnelley, Lancaster	Pennsylvania	Toluene	Air	163,900 **
Accellent, Trappe	Pennsylvania	Trichloroethylene	Air	69,600 **
Montgomery Chem., Conshohocken	Pennsylvania	Methanol	Air	67,200 **
Armstrong Ind., Marietta	Pennsylvania	Formaldehyde	Air	93,000 ***
Grace Davison Curtis Bay Works, Baltimore	Maryland	Ammonia	Air	194,000 *
Salisbury Feed & Grain	Maryland	N-hexane	Air	241,000 **
Plymouth Tube, Salisbury	Maryland	Trichloroethylene	Air	40,600 **
Luke Paper Co., Luke	Maryland	Methanol	Air	347,000 **
Brandon Shores Power Plant, Baltimore	Maryland	Hydrochloric acid	Air	11,000,000 **
Brandon Shores Power Plant, Baltimore	Maryland	Sulfuric acid	Air	1,600,000 **
Brandon Shores Power Plant, Baltimore	Maryland	Hydrogen Fluoride	Air	490,000 **
Millennium Chemicals, Baltimore	Maryland	Carbonyl Sulfide	Air	424,000 **

* Near the Delaware State total for this chemical

** Exceeds the Delaware State total for this chemical

*** Chemical not reported for 2009 in Delaware

As noted on page 4, these amounts do not indicate the amount of human exposure. However, they do provide a comparison between releases in Delaware and some TRI chemicals released by some nearby facilities in neighboring states.

TRI and the Economy

The declining economy in Delaware also influenced other facilities that continue to operate. Although many of the changes noted in this report were the result of normal changes within the facilities, some were the result of facility closings. Facilities that closed in 2008 were Dow Reichhold and Chrysler. Dow Reichhold closed in November and Chrysler closed in December. General Motors closed in July, 2009. These three facilities had declining production during 2008 and earlier years, and were not required to report for 2009. These three facilities reported a total of 191,600 pounds of on-site releases for 2008, their last year of declining production, and an average of 605,200 pounds annually for 1998-2007. These amounts, when compared to the 4,200,000 pounds total reduction for 2009, are measurable but relatively small. Clearly, most of these reductions were the result of the imminent facility closings and few, if any, the result of new pollution control initiatives at these facilities.

The Production Index (PI) that is reported along with TRI release and waste management data is one way to estimate the impact of the economy, because the PI is the amount of production or activity directly associated with the chemical being reported. Some facilities, such as the power plants, can report the same PI for all chemicals, as they are directly related to the production of power. Other facilities, such as the ones in chemical manufacturing, report different PIs for different chemicals, as they are related more to the manufacture of specific chemicals. For some facilities, the determination of a PI is not precise, and therefore the PI may not be an exact indicator of production or chemical activity.

For the top 15 facilities, the PI was in a range of 0.31 to 0.98 for 11 facilities, 1.00 for three, and 1.08 for one. Of the total reduction in on-site releases of 4.0 million pounds for these facilities, the amount of reduction in on-site release predicted by the PI was 2.1 million pounds (53% of the total reduction). This represents the effect of the economy. The difference between the predicted amount and the actual 2009 amount was an additional 1.9 million pounds (47% of the total reduction). This represents the effect of the pollution control efforts. These efforts could be because of increased regulation or because of plant or company-sponsored pollution control initiatives.

As noted above, facility closings did not contribute a significant amount toward the total 4.2 million pound reduction for all Delaware facilities in on-site releases for 2009. With the current depressed state of the national economy, it is likely that many facilities in many states will also report lower amounts for 2009.

International “TRI”

The United State's Toxics Release Inventory (TRI) is one of several similar programs established, or being established, by countries around the world. Industrial facilities in these countries are required to report their emissions and other waste management of toxic chemicals to databases in their respective countries. These databases are designed to track the quantities of chemicals that are released to the air, land or water, or transferred to another site for recycle, treatment or disposal. The term used internationally for these TRI-like systems is Pollutant Release and Transfer Register (PRTR). Corporate leaders, environmental advocates, policy makers and the public alike can use this PRTR information to track pollution performance and develop strategies to

reduce emissions and protect our shared environment and improve quality of life. The web site for these PRTR programs is <http://www.prtr.net/>. There are now over 20 PRTR programs in the world, with more being developed each year.

Each country that develops a PRTR often expands on or modifies these basic elements. The U.S. TRI, for example, provides the public with data for on-site waste management of chemicals. The Canadian PRTR, called the National Pollutant Release Inventory (NPRI) collects data on many of the same chemicals on the US TRI list, including dioxins and PACs, but also on Criteria Pollutants (CO, NO_x, SO₂, particulate matter <100 microns, <10 microns, and <2.5 microns, and VOCs). Mexico implemented a mandatory PRTR, Registro de Emisiones y Transferencia de Contaminantes (RETC), which reported for the first time for 2004, but fewer chemicals are reported at this time.

In North America, the governments of the U.S., Canada and Mexico are working together to improve the ability to compare data from their three PRTR systems. This work is coordinated by the North American Commission for Environmental Cooperation (NACEC), an organization created with the North American Free Trade Association (NAFTA). The NACEC's work includes publishing an annual report titled *Taking Stock* that compiles and compares the PRTR data, and operating a searchable website of comparable North American PRTR data. The link to the EPA web site is <http://www.epa.gov/tri/programs/international/index.htm> for the North America PRTR.

European countries, Japan, and Australia also have their own pollution inventory programs. Reporting requirements, including reportable chemicals, reporting thresholds, and reporting dates, for these programs vary by country.

FOR FURTHER INFORMATION

Access to the TRI Files - DNREC is responsible for collecting, processing, and distributing information submitted by Delaware facilities under the TRI program. This 2009 TRI report may be viewed at: <http://www.serc.delaware.gov/reports.shtml>. Additional information not contained in this report is available to the public through the EPCRA Reporting Program located within DNREC. A second, less technical data summary is available at the same location. A searchable database is located at: <http://www.serc.delaware.gov/services/search/index.shtml>.

The reports submitted by facilities are available for review through the Freedom of Information Act (FOIA) process from DNREC's EPCRA Reporting Program located at 655 South Bay Road, Suite 5N, in Dover. Custom reports can also be generated from the database. For information on placing a request, call the TRI Coordinator at (302) 739-9405 during business hours. An on-line FOIA application is also available at: http://www.dnrec.state.de.us/air/aqm_page/foia.htm.

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. The two-page fact sheets (ToxFAQ's) are available upon request from DNREC's TRI program or available through the Agency for Toxic Substances and Disease Registry (ATSDR) at: <http://www.atsdr.cdc.gov/toxfaqs/index.asp>

EPA's TRI Home Page - The TRI home page provides information on the many facets of the TRI program at the EPA, including an Executive Summary, Q&A's, a link now to the preliminary 2009 national TRI data and later this year to the complete 2009 data, a current list of reportable chemicals, 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/.

TRI Reporting Forms - Reporting instructions, reporting guidance, and examples of the traditional paper reporting forms are at epa.gov/tri/report/index.htm.

Toxics Release Inventory Public Data Release/National Analysis - The EPA's annual TRI report. It covers national information and provides a good perspective on how Delaware compares to other states: <http://www.epa.gov/tri/tridata/index.htm>. The 2009 edition of this report will be available late 2010. It can also be obtained by calling the Federal EPCRA Information Hotline at 1-800-424-9346. Other searchable database programs such as Envirofacts, TRI.net, and TRI-CHIP are EPA-developed programs that provide public access to multiple environmental databases, including TRI. Links are available to data about hazardous waste, water permits, drinking water, Superfund sites, air, water, toxics, and more. On-line queries allow the user to retrieve and download data and create reports, as well as generate maps

Right-to-Know Network (RTK NET) - Searchable nationwide TRI data is available through RTK NET. RTK NET 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.rtknet.org.

Delaware Dept. of 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>.

The Office of Pollution Prevention & Toxics - (OPPTS) is a part of the EPA that:

- Promotes pollution prevention as the guiding principle for controlling industrial pollution;
- Promotes safer chemicals through a combination of regulatory and voluntary efforts;
- Promotes risk reduction so as to minimize exposure to existing substances such as lead, asbestos, dioxin, and polychlorinated biphenyls; and,
- Promotes public understanding of risks by providing understandable, accessible and complete information on chemical risks to the broadest audience possible.

OPPTS is at: <http://www.epa.gov/oppt/index.htm>

Risk Screening Environmental Indicators (RSEI). This model was developed by the EPA's Office of Pollution Prevention & Toxics as a risk-screening tool that provides a relative comparison of TRI releases. This application is available by download through the Internet at: http://www.epa.gov/oppt/rsei/pubs/get_rsei.html#new.

Delaware's Pollution Prevention Program can be accessed at:

<http://www.dnrec.state.de.us/dnrec2000/p2/>.

Delaware Air Quality Report - The annual air quality report is prepared by the Air Surveillance Branch in the Air Quality Management Section 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 more information, please call (302) 323-4542. This report is available on-line at:

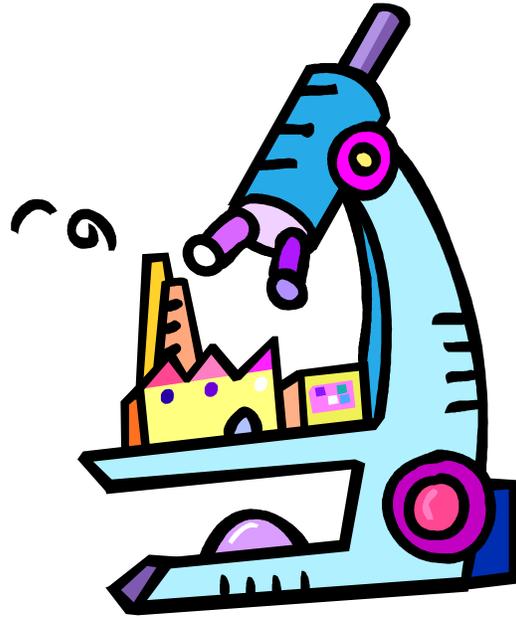
<http://www.awm.delaware.gov/AQM/Pages/AQMPublicationsandReports.aspx> and air toxics information is at: <http://www.awm.delaware.gov/AQM/Pages/DATAS1.aspx>. The EPA site for additional air quality information is: <http://www.epa.gov/oar/oaqps/publicat.html>.

Delaware's Department of Natural Resources and Environmental Control has a variety of environmental information, including this report and other publications and reports, which are available at: <http://www.dnrec.delaware.gov/info/pages/ELibrary.aspx>.

In addition to TRI, there are other provisions of the Emergency Planning and Community Right to Know Act (EPCRA), which provide information to the public as well as to local emergency planning and response organizations. Delaware has its own EPCRA statute which established these provisions under State law. For additional information, visit the Delaware EPCRA website at: <http://www.serc.delaware.gov/epcra.shtml>.

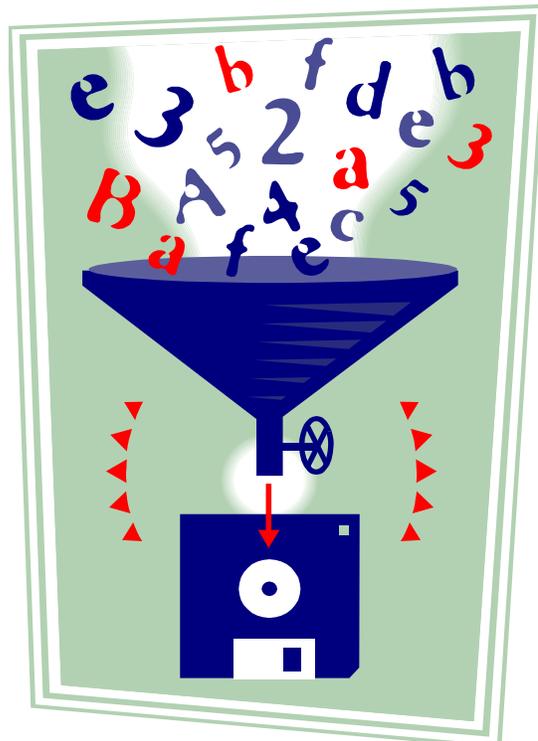
Questions or comments regarding the TRI program are welcome. Please direct questions, comments, or requests to:

TRI Coordinator
EPCRA Reporting Program
Emergency Prevention and Response Branch
DNREC Division of Air and Waste Management
655 S. Bay Rd., Suite 5N
Dover, DE 19901
Tel. (302) 739-9405, Fax (302) 739-3106
E-mail: john.parker@state.de.us



APPENDICES

2009





APPENDIX A

WHAT IS COMMUNITY RIGHT-TO-KNOW?

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT

A dramatic and fatal accident involving the release of a large quantity of methyl isocyanate gas occurred in Bhopal, India on December 3, 1984. As a result of this release and similar, although less tragic, accidents that occurred in the United States, Congress enacted the Emergency Planning and Community Right to Know Act (EPCRA), as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986. EPCRA requires certain facilities to report information about hazardous chemicals and substances at their facilities to Federal, state, and local authorities. The objective is to improve the ability of the facility and of local emergency response agencies to plan for and respond to chemical emergencies, and to give citizens information about chemicals present in their communities. Presidents have also issued Executive Orders to Federal agencies which mandate their compliance with certain EPCRA requirements. 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 of the release. A follow up written report is also required to provide details about the sequence of events, the actual response actions, and to identify any known or anticipated health risks associated with the release. The public may receive notification through the Environmental Release Notification System.

In response to Senate Bill 33, which became law in July 2001, the Department of Natural Resources and Environmental Control (DNREC) developed a system to allow Delawareans to learn promptly of releases or discharges of contaminants or pollutants that meet or exceed certain thresholds in their neighborhoods or throughout the state. When you register, you choose to be notified in one of three ways: By phone, by e-mail or by fax. You also can choose to be notified about releases from specific facilities or about all releases that occur in one or more zip codes throughout the state. Interested individuals may register for notification at: <http://www.dnrec.state.de.us/dnrec2000/notification/pub/>.

HAZARDOUS CHEMICAL REPORTING

Under U.S. Occupational Safety and Health Administration (OSHA) 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. These reports, also known as Tier II forms, can be filed on-line using Tier II Manager™ and data is available immediately for use by the EPCRA Reporting

WHAT IS COMMUNITY RIGHT-TO-KNOW?

Program and emergency planning and response agencies. The data provides information on the identity, hazards, amounts, and locations of reportable chemicals at the facility, as well as emergency contacts, and a site plan.

Fees are also collected based on the number and type of chemicals reported. The fees are primarily used to support operations of the LEPCs.

TOXICS RELEASE INVENTORY (TRI) REPORTING

Facilities covered under TRI are required to file annual reports on-site releases, off-site transfers, and on-site waste management activities related to their use of certain toxic chemicals. These reports can be filed electronically at the same time to EPA and DNREC using EPA's TRI-ME (TRI Made Easy) program. This data is compiled and made available to the public through this report and other means. For more information regarding TRI, please refer to the **Introduction** and **For Further Information** sections contained in this report.

RISK MANAGEMENT PLANS

Additional information regarding hazardous chemicals is available to the public due to the requirements contained in Title I, Section 112(r) of the Federal Clean Air Act Amendments of 1990. Section 112(r) requires that facilities handling substances with catastrophic potential submit a Risk Management Plan (RMP) that contains an executive summary, registration, off-site consequence analysis (OCA), five-year accident history, and a summary of their prevention and emergency response programs. The OCA consists of a "worst case" release scenario and an "alternative" release scenario. The "worst case" scenario estimates the area and populations affected by a catastrophic release. The "worst case" scenario is a hypothetical, conservative modeling exercise. Emergency planners use the toxic "alternative" scenario as a more realistic modeling exercise.

The information contained in the RMP builds upon the right-to-know principles of EPCRA by making all of the information including the OCA and five-year accident history available to local communities, emergency planners, and other stakeholders. Concerned citizens or the media may ask facilities to explain the risk management programs that they use to prevent or minimize the consequence of a catastrophic release. EPA encourages this communication to reduce the risk. This is similar to the way public knowledge of chemical releases to the environment through the availability of TRI data has led reporting facilities to reduce their toxic releases. Because of security concerns, the RMP information is restricted. However, this information is available for Delaware facilities by contacting the Accidental Release Prevention Program (ARP) or by contacting the EPA reading room in Philadelphia at: <http://www.epa.gov/libraries/region3.html>

In Delaware, the Extremely Hazardous Substances Risk Management Act, first passed in 1988, and amended in 1998, adopted new federal guidelines that enhance the community right-to-know information. The DE Accidental Release Program (ARP) has been granted full authority by the US EPA to administer the program within DNREC, reviews the facility RMPs for accuracy and completeness and inspects facilities to ensure that appropriate accidental release prevention programs have been implemented. For more information on accidental release prevention in Delaware, please refer to the DNREC ARP website at: <http://www.awm.delaware.gov/EPR/Pages/AccidentalReleasePrevention.aspx>.



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WHAT IS COMMUNITY RIGHT-TO-KNOW?

AGILENT TECHNOLOGIES NEWPORT

538 FIRST STATE BOULEVARD
NEWPORT, DE 19804
ROBERT LYDUM
302-633-8065

CAMDEL METALS

124 VEPCO BLVD.
CAMDEN, DE 19934
JOHN COATES
302-697-9521

ALLEN'S HATCHERY DELMAR

ROUTE 13A
DELMAR, DE 19940
THOMAS BRINSON
302-629-9163

CARL KING

1400 E. LEBANON ROAD
DOVER, DE 19901
RANDY WAYNE
301-322-3111

ALLEN'S HATCHERY SEAFORD MILL

20799 ALLEN ROAD
SEAFORD, DE 19973
THOMAS BRINSON
302-629-9163

CHROME DEPOSIT

9 TYLER WAY
NEWARK, DE 19713
JOHN BLASKO
302-368-7525

ARLON

1100 GOVERNOR LEA ROAD
BEAR, DE 19701
ROBERT CARINI
302-834-2100

CLARIANT

745 MCCOLLEY ST.
MILFORD, DE 19963
STEVE SNOW
508-829-6321

BASF - CIBA

205 SOUTH JAMES STREET
NEWPORT, DE 19804
MAUREEN PAUKERT
973-245-6077

CRODA

213 & 315 CHERRY LANE
NEW CASTLE, DE 19720
ROBERT J. TOUHEY
302-429-5269

BASF - JOHNSON POLYMER

100 INDUSTRIAL BOULEVARD
SEAFORD, DE 19973
MAUREEN PAUKERT
973-245-6077

DENTSPLY CAULK LAKEVIEW

38 WEST CLARKE AVENUE
MILFORD, DE 19963-0359
ANDY JOHNSON
302-422-4511

BUCK ALGONQUIN

370 NORTH MAIN ST.
SMYRNA, DE 19977
STEPHEN GASTON
302-65-6900

DENTSPLYCAULK WEST MILFORD

779 EAST MASTEN CIRCLE
MILFORD, DE 19963-0359
ANDY JOHNSON
302-422-4511

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WHAT IS COMMUNITY RIGHT-TO-KNOW?



DOVER AFB

436 CES/CC 600 CHEVERON AVE.
DOVER, DE 19902
BRIAN MAGUIRE
302-677-3370

DUPONT EDGE MOOR

104 HAY ROAD
EDGE MOOR, DE 19809
RICHARD STRAITMAN
302-999-5226

DUPONT RED LION

766 GOVERNOR LEA ROAD
DELAWARE CITY, DE 19706
KELLY KOBER
302-892-5561

E-A-R SPECIALTY COMPOSITES

650 DAWSON DRIVE
NEWARK, DE 19713
TOM FLAHERTY
302-286-2415

EDGE MOOR/HAY ROAD POWER PLT.

200 HAY ROAD
WILMINGTON, DE 19809
VICTORIA LUTTRELL
302-451-5111

EVRAZ CLAYMONT STEEL

4001 PHILADELPHIA PIKE
CLAYMONT, DE 19703-2794
TOMASZ WESOLOWSKI
302-792-5400

FORMOSA PLASTICS

780 SCHOOLHOUSE ROAD
DELAWARE CITY, DE 19706-0320
KIMBERLY BENNETT
302-836-2256

FUJIFILM INAGING COLORANTS

233 CHERRY LANE
NEW CASTLE, DE 19720
STEPHEN POORMAN
302-472-1218

GAC SEAFORD

25938 NANTICOKE STREET
SEAFORD, DE 19973
MICHAEL THRASHER
813-248-2101

HANESBRANDS

631 RIDGLEY STREET, SUITE #1
DOVER, DE 19904-2772
TOMMY THOMPSON
336-519-2715

HANOVER FOODS

ROUTE 6 & DUCK CREEK ROAD
CLAYTON, DE 19938
WILLIAM SIMPSON
302-653-9281

HIRSH INDUSTRIES

1525 MCKEE ROAD
DOVER, DE 19904
KEN MURR
302-678-3454

HONEYWELL

6100 PHILADELPHIA PIKE
CLAYMONT, DE 19703
TIMOTHY P. LOVE
302-791-6745

IKO WILMINGTON

120 HAY ROAD
WILMINGTON, DE 19809
DAVID FOULKES
302-764-3100



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WHAT IS COMMUNITY RIGHT-TO-KNOW?

INDIAN RIVER POWER PLANT

29416 POWER PLANT ROAD
MILLSBORO, DE 19966-0408
MERIDTH MOORE
609-524-4522

INSTEEL WIRE

800 NEW CASTLE AVENUE
WILMINGTON, DE 19801
W. GARY LOGAN
302-656-3121

INTERVET

29160 INTERVET LANE
MILLSBORO, DE 19966
RONALD VEROSKO
302-934-4265

INVISTA SEAFORD

25876 DUPONT ROAD
SEAFORD, DE 19973
STEVEN KIMPTON
302-629-1865

JOHNSON CONTROLS

700 NORTH BROAD STREET
MIDDLETOWN, DE 19709
RICK THOMSON
302-378-9985

JUSTIN TANKS

21413 CEDAR CREEK AVENUE
GEORGETOWN, DE 19947-6306
EDWARD M. SHORT
302-856-3521

KUEHNE CHEMICAL

1645 RIVER ROAD
DELAWARE CITY, DE 19706
ALAN ROGERS
302-834-4557

MACDERMID AUTOTYPE

701 INDUSTRIAL DRIVE
MIDDLETOWN, DE 19709-1085
J. LOUIS GRAHAM
302-378-3100

MEDAL

305 WATER STREET
NEWPORT, DE 19804
STEVE FORBES
302-225-2137

METAL MASTERS

100 INDUSTRIAL BLVD.
CLAYTON, DE 19938
RICHARD J. MURPHY
302-653-3000

MOTECH AMERICAS

231 LAKE DRIVE
NEWARK, DE 19702
JAMES TOMPKINS
302-451-2692

MOUNTAIRE FARMS FRANKFORD

11 DAISEY STREET
FRANKFORD, DE 19945
ROGER MARINO
302-934-3123

MOUNTAIRE FARMS OF DELAWARE

29106 JOHN J WILLIAMS HWY.
MILLSBORO, DE 19966
ROGER MARINO
302-934-3123

MOUNTAIRE FARMS OF DELMARVA

HOOSIER STREET & RAILROAD AVENUE
SELBYVILLE, DE 19975-0710
ROGER MARINO
302-934-3123

APPENDIX A

WHAT IS COMMUNITY RIGHT-TO-KNOW?



NORAMCO

500 SWEDES LANDING ROAD
WILMINGTON, DE 19801
JOHN O'HARA
706-353-4451

NRG DOVER

1280 W. NORTH STREET
DOVER, DE 19904-7756
MEREDITH MOORE
609-524-4522

OCCIDENTAL CHEMICAL

1657 RIVER ROAD
NEW CASTLE, DE 19720-5194
JOHN B. ARMSTRONG
302-834-3831

ORIENT

111 PARK AVENUE
SEAFORD, DE 19973
KURT SCHIMMEL
302-628-1300

PERDUE BRIDGEVILLE

16447 ADAMS ROAD
BRIDGEVILLE, DE 19933
LUIS LUNA
410-543-3166

PERDUE GEORGETOWN

20621 SAVANNAH ROAD
GEORGETOWN, DE 19947
LUIS LUNA
410-543-3166

PERDUE MILFORD

255 NORTH REHOBOTH BOULEVARD
MILFORD, DE 19963
LUIS LUNA
410-543-3166

PICTSWEET

18215 WESLEY CHURCH ROAD
BRIDGEVILLE, DE 19933
ALLEN WATTS
731-663-7600

PINNACLE FOODS

29984 PINNACLE WAY
MILLSBORO, DE 19966
DOUG EMMETT
973-541-8646

PPG DOVER

1886 LYNNBURY WOODS ROAD
DOVER, DE 19904
MITCH MAGEE
302-678-9800

PREMCOR REFINING GROUP

4550 WRANGLE HILL ROAD
DELAWARE CITY, DE 19706
BILL DAY
210-345-2928

PRINCE MINERALS

301 PIGEON POINT ROAD
NEW CASTLE, DE 19720
MARY SIMPLER
646-747-4176

ROHM & HAAS B2 B3 B8

451 BELLEVUE ROAD
NEWARK, DE 19713
PETER PALENA
302-366-0500

ROHM & HAAS BLDG. 7 B7 B15

50 BELLEVUE ROAD
NEWARK, DE 19713
PETER PALENA
302-366-0500



APPENDIX A

WHAT IS COMMUNITY RIGHT-TO-KNOW?

ROHM & HAAS TECH. CENTER B5 B6

351 BELLEVUE ROAD
NEWARK, DE 19713
PETER PALENA
302-366-0500

SUNOCO MARCUS HOOK

100 GREEN STREET
MARCUS HOOK, PA, PA 19061
DONALD ZOLADKIEWICZ
610-859-1038

SERVICE ENERGY DOVER

3799 N. DUPONT HIGHWAY
DOVER, DE 19901
DONALD L. STEINER
302-734-7433

V&S DELAWARE GALVANIZING, LLC

511 CARROLL DRIVE
NEW CASTLE, DE 19720
JOHNNY ROIBU
302-322-1420

SPI PHARMA

40 CAPE HENLOPEN DRIVE
LEWES, DE 19958-1196
STEVE FREEBERY
302-576-8692

VP RACING FUELS

16 BROOKHILL DRIVE
NEWARK, DE 19714
JIM KELLY
302-368-1500

APPENDIX C

2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
AGILENT TECHNOLOGIES NEWPORT							
ACETONITRILE		160	0	0	160	18,540	0
METHANOL		279	0	0	279	38,263	0
TOLUENE		85	0	0	85	160,006	0
AGILENT TECHNOLOGIES NEWPORT Total		524	0	0	524	216,809	0
ALLEN'S HATCHERY DELMAR							
COPPER COMPOUNDS	1	0	0	0	0	0	0
MANGANESE COMPOUNDS	1	0	0	0	0	0	0
ZINC COMPOUNDS	1	0	0	0	0	0	0
ALLEN'S HATCHERY DELMAR Total	3	0	0	0	0	0	0
ALLEN'S HATCHERY SEAFORD							
COPPER COMPOUNDS	1	0	0	0	0	0	0
ALLEN'S HATCHERY SEAFORD Total	1	0	0	0	0	0	0
ARLON							
COPPER		5	0	0	5	1,120	0
ETHYLBENZENE		209	0	0	209	460	19,000
XYLENE (MIXED ISOMERS)		854	0	0	854	2,600	74,000
ARLON Total		1,068	0	0	1,068	4,180	93,000
BASF JOHNSON POLYMER							
AMMONIA		4,949	0	0	4,949	1,082	0
BUTYL ACRYLATE		183	0	0	183	0	87
CERTAIN GLYCOL ETHERS		5	0	0	5	795	0
ETHYL ACRYLATE		210	0	0	210	0	18
METHYL METHACRYLATE		266	0	0	266	0	422
STYRENE		353	0	0	353	0	1,142
BASF JOHNSON POLYMER Total		5,966	0	0	5,966	1,877	1,669

APPENDIX C

APPENDIX C

2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
BUCK ALGONQUIN							
COPPER		0	0	0	0	0	0
BUCK ALGONQUIN Total		0	0	0	0	0	0
CAMDEL METALS							
CHROMIUM		0	0	0	0	31,517	0
MANGANESE		0	0	0	0	3,198	0
NICKEL		0	0	0	0	24,163	0
TRICHLOROETHYLENE		2,375	0	0	2,375	7,340	0
CAMDEL METALS Total		2,375	0	0	2,375	66,218	0
CARL KING							
1,2,4-TRIMETHYLBENZENE	1	0	0	0	0	0	0
NAPHTHALENE	1	0	0	0	0	0	0
XYLENE (MIXED ISOMERS)	1	0	0	0	0	0	0
CARL KING Total	3	0	0	0	0	0	0
CHROME DEPOSIT							
LEAD COMPOUNDS		0	0	0	0	7,350	0
CHROME DEPOSIT Total		0	0	0	0	7,350	0
CIBA							
ANILINE		23	0	0	23	223,323	688
BIPHENYL		74	0	0	74	160,703	2,321
CYCLOHEXANE		27	0	0	27	11,925	3,151
METHANOL		13,626	0	0	13,626	336,290	1,073,166
NITRIC ACID		0	0	0	0	0	15,812
N-METHYL-2-PYRROLIDONE		0	0	0	0	4,882	0
P-CHLOROANILINE		7	0	0	7	3,810	457
XYLENE (MIXED ISOMERS)		673	0	0	673	634	3,134
CIBA Total		14,430	0	0	14,430	741,567	1,098,729

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
CLARIANT							
ZINC COMPOUNDS		5	0	0	5	1,509	0
CLARIANT Total		5	0	0	5	1,509	0
CRODA							
CERTAIN GLYCOL ETHERS		16	0	0	16	2,058	0
DIETHANOLAMINE		69	0	0	69	3,824	0
ETHYLENE OXIDE		1,495	0	0	1,495	0	0
METHANOL		1,124	0	0	1,124	30,149	0
NAPHTHALENE		9	0	0	9	0	0
PROPYLENE OXIDE		467	0	0	467	0	0
CRODA Total		3,181	0	0	3,181	36,031	0
DENTSPLY MAIN PLANT							
MERCURY		0	0	0	0	2,492	0
DENTSPLY MAIN PLANT Total		0	0	0	0	2,492	0
DENTSPLY WEST PLANT							
METHANOL		0	0	0	0	12,904	0
METHYL METHACRYLATE		2,608	0	0	2,608	34,622	0
TOLUENE		750	0	0	750	11,179	0
DENTSPLY WEST PLANT Total		3,358	0	0	3,358	58,705	0
DOVER AFB							
ETHYLBENZENE		70	0	0	70	0	0
LEAD		84	0	0	84	0	0
NAPHTHALENE		111	0	0	111	0	0
DOVER AFB Total		265	0	0	265	0	0

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
DUPONT EDGE MOOR							
ARSENIC COMPOUNDS		0	69	0	69	126	0
BARIUM COMPOUNDS		1	4,788	0	4,789	21,199	0
CARBONYL SULFIDE		213,254	0	0	213,254	0	0
CHLORINE		5,231	0	0	5,231	0	2,209,709
CHROMIUM COMPOUNDS		0	43	0	43	479,733	0
COBALT COMPOUNDS		0	33	0	33	5,690	0
CREOSOTE		935	0	6,579	7,514	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	2	0
HEXACHLOROBENZENE		0	0	0	0	52	0
HYDROCHLORIC ACID		23,226	0	0	23,226	0	17,000,990
LEAD COMPOUNDS		0	57	0	57	36,595	0
MANGANESE COMPOUNDS		1	34,608	0	34,609	1,734,309	0
NICKEL COMPOUNDS		5	241	0	246	15,541	0
OCTACHLOROSTYRENE		0	0	0	0	2	0
PENTACHLOROBENZENE		0	0	0	0	2	0
PHOSGENE		328	0	0	328	0	168,449
POLYCHLORINATED BIPHENYLS		0	0	0	0	5	0
POLYCYCLIC AROMATIC COMPOUNDS		77	0	536	613	0	0
TITANIUM TETRACHLORIDE		18	0	0	18	0	1,958,151
TOLUENE		1,353	0	0	1,353	78	0
VANADIUM COMPOUNDS		2	54	0	56	277,441	0
ZINC COMPOUNDS		10	145	0	155	27,395	0
DUPONT EDGE MOOR Total		244,441	40,038	7,115	291,594	2,598,170	21,337,299
DUPONT RED LION							
SULFURIC ACID		6,632	0	0	6,632	0	0
DUPONT RED LION Total		6,632	0	0	6,632	0	0
EAR							
DIISOCYANATES		1	0	0	1	805	0
TOLUENE DIISOCYANATE (MIXED ISOMERS)		2	0	0	2	210	0
EAR Total		3	0	0	3	1,015	0

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Source: DNREC 2009 TRI Database, October, 2010
A "1" in the Form A column indicates a Form A report

All Amounts Are in Pounds

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
EDGE MOOR/HAY ROAD POWER PLANTS							
AMMONIA		1,069	0	0	1,069	210	0
BARIUM COMPOUNDS		2,195	489	0	2,684	44,567	0
BENZO(G,H,I)PERYLENE		0	0	0	0	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0
ETHYLENE GLYCOL		6,000	0	0	6,000	27,869	0
HYDROCHLORIC ACID		497,364	0	0	497,364	0	0
HYDROGEN FLUORIDE		30,575	0	0	30,575	0	3,442
LEAD COMPOUNDS		335	330	0	665	3,940	0
MERCURY COMPOUNDS		7	0	0	7	93	0
NITRATE COMPOUNDS		0	22	0	22	18,128	0
POLYCYCLIC AROMATIC COMPOUNDS		36	0	0	36	0	0
SULFURIC ACID		23,826	0	0	23,826	0	49,142
VANADIUM COMPOUNDS		246	0	0	246	20,262	0
EDGE MOOR/HAY ROAD POWER PLANTS Total		561,653	841	0	562,494	115,069	52,584
EVRAZ CLAYMONT STEEL							
CHROMIUM COMPOUNDS		79	4	106	189	27,060	0
COPPER COMPOUNDS		98	74	266	438	28,177	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0
LEAD COMPOUNDS		262	56	38	356	136,644	0
MANGANESE COMPOUNDS		244	64	7,107	7,415	157,007	0
MERCURY COMPOUNDS		59	0	0	59	2	0
NICKEL COMPOUNDS		22	39	191	252	5,303	0
ZINC COMPOUNDS		1,075	178	158	1,411	1,061,524	0
EVRAZ CLAYMONT STEEL Total		1,839	415	7,866	10,121	1,415,717	0
FORMOSA PLASTICS							
AMMONIA		11,252	0	0	11,252	0	0
VINYL ACETATE		31,943	0	0	31,943	0	0
VINYL CHLORIDE		43,800	5	0	43,805	0	219,400
FORMOSA PLASTICS Total		86,995	5	0	87,000	0	219,400

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
FUJIFILM IMAGING COLORANTS							
NITRATE COMPOUNDS		0	0	0	0	1,712	0
FUJIFILM IMAGING COLORANTS Total		0	0	0	0	1,712	0
GAC							
1,2,4-TRIMETHYLBENZENE	1	0	0	0	0	0	0
GAC Total	1	0	0	0	0	0	0
HANESBRANDS							
NITRATE COMPOUNDS		0	0	0	0	75,564	0
HANESBRANDS Total		0	0	0	0	75,564	0
HANOVER FOODS							
AMMONIA		10,001	0	0	10,001	0	0
HANOVER FOODS Total		10,001	0	0	10,001	0	0
HIRSH INDUSTRIES							
CERTAIN GLYCOL ETHERS		13,032	0	0	13,032	0	0
HIRSH INDUSTRIES Total		13,032	0	0	13,032	0	0
HONEYWELL							
BORON TRIFLUORIDE		377	0	0	377	4	130,000
HYDROGEN FLUORIDE		547	0	0	547	0	130
METHANOL		4	0	0	4	60	60
N-HEXANE		2,200	0	0	2,200	25,700	194,000
HONEYWELL Total		3,128	0	0	3,128	25,764	324,190
IKO							
POLYCYCLIC AROMATIC COMPOUNDS		0	0	0	0	83	3
IKO Total		0	0	0	0	83	3

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
INDIAN RIVER POWER PLANT							
AMMONIA		39,128	0	0	39,128	0	3,574,624
BARIUM COMPOUNDS		425	750	309,249	310,424	6	0
BENZO(G,H,I)PERYLENE		0	0	0	0	1	0
CHROMIUM COMPOUNDS		129	250	26,546	26,925	0	0
COPPER COMPOUNDS		101	1,327	28,353	29,781	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0
HYDROCHLORIC ACID		1,511,338	0	0	1,511,338	0	25,918
HYDROGEN FLUORIDE		144,044	0	0	144,044	0	17,390
LEAD COMPOUNDS		107	0	17,251	17,358	0	0
MANGANESE COMPOUNDS		191	5	47,060	47,256	0	0
MERCURY COMPOUNDS		70	0	57	127	0	0
NAPHTHALENE	1	0	0	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS		1	0	0	1	54	0
SULFURIC ACID		61,484	0	0	61,484	0	267,435
VANADIUM COMPOUNDS		133	5	44,533	44,671	0	0
ZINC COMPOUNDS		328	750	21,033	22,111	0	0
INDIAN RIVER POWER PLANT Total	1	1,757,479	3,087	494,082	2,254,648	61	3,885,367
INSTEEL WIRE							
LEAD COMPOUNDS		0	0	0	0	69	0
INSTEEL WIRE Total		0	0	0	0	69	0
INTERVET							
MERCURY COMPOUNDS		0	0	0	0	3	0
INTERVET Total		0	0	0	0	3	0
INVISTA							
BENZO(G,H,I)PERYLENE		0	0	0	0	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0
HYDROCHLORIC ACID		59,000	0	0	59,000	0	3,800

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
LEAD COMPOUNDS		9	0	170	179	0	0
MERCURY COMPOUNDS		13	0	0	13	0	0
POLYCYCLIC AROMATIC COMPOUNDS		0	0	0	0	0	0
INVISTA Total		59,022	0	170	59,192	0	3,800
JOHNSON CONTROLS							
ANTIMONY COMPOUNDS		0	0	0	0	12,462	0
LEAD COMPOUNDS		168	10	0	178	3,354,757	0
JOHNSON CONTROLS Total		168	10	0	178	3,367,219	0
JUSTIN TANKS							
STYRENE		16,680	0	0	16,680	451	0
JUSTIN TANKS Total		16,680	0	0	16,680	451	0
KUEHNE CO							
CHLORINE		1,000	0	0	1,000	0	0
KUEHNE CO Total		1,000	0	0	1,000	0	0
MACDERMID							
TOLUENE DIISOCYANATE (MIXED ISOMERS)		6	0	0	6	0	643
MACDERMID Total		6	0	0	6	0	643
MEDAL							
METHANOL		386	0	0	386	17,000	1,014,650
N-HEXANE		476	0	0	476	0	861,314
N-METHYL-2-PYRROLIDONE		984	0	0	984	53,684	0
MEDAL Total		1,846	0	0	1,846	70,684	1,875,964
METAL MASTERS							
CHROMIUM		5	0	0	5	147,317	0
NICKEL		1	0	0	1	47,627	0
METAL MASTERS Total		6	0	0	6	194,944	0

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
MOTECH AMERICAS							
LEAD		0	0	0	0	137	0
MOTECH AMERICAS Total		0	0	0	0	137	0
MOUNTAIRE FARMS FRANKFORD FEED MILL							
ARSENIC COMPOUNDS	1	0	0	0	0	0	0
COPPER COMPOUNDS	1	0	0	0	0	0	0
MANGANESE COMPOUNDS	1	0	0	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS		1	0	0	1	0	0
ZINC COMPOUNDS	1	0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL Total	4	1	0	0	1	0	0
MOUNTAIRE FARMS OF DELAWARE							
AMMONIA		1,487	0	28,256	29,743	0	29,743
ARSENIC COMPOUNDS	1	0	0	0	0	0	0
COPPER COMPOUNDS	1	0	0	0	0	0	0
MANGANESE COMPOUNDS	1	0	0	0	0	0	0
NAPHTHALENE	1	0	0	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS		2	0	0	2	0	0
ZINC COMPOUNDS	1	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE Total	5	1,489	0	28,256	29,745	0	29,743
MOUNTAIRE FARMS OF DELMARVA							
BENZO(G,H,I)PERYLENE		1	0	0	1	0	0
POLYCYCLIC AROMATIC COMPOUNDS		23	0	0	23	0	0
MOUNTAIRE FARMS OF DELMARVA Total		23	0	0	23	0	0
NORAMCO							
DICHLOROMETHANE		485	0	0	485	41,279	119,534
FORMIC ACID		5	0	0	5	0	0
METHANOL		411	0	0	411	393,912	393,913

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
N,N-DIMETHYLANILINE		0	0	0	0	18,572	0
N-BUTYL ALCOHOL		10	0	0	10	420,374	420,375
TOLUENE		524	0	0	524	654,718	814,569
NORAMCO Total		1,435	0	0	1,435	1,528,855	1,748,391
NRG DOVER							
HYDROCHLORIC ACID		108,386	0	0	108,386	0	0
LEAD COMPOUNDS		2	0	0	2	96	0
MERCURY COMPOUNDS		7	0	0	7	2	0
SULFURIC ACID		8,729	0	0	8,729	0	36,000
NRG DOVER Total		117,124	0	0	117,124	98	36,000
OCCIDENTAL CHEMICAL							
MERCURY		0	8	0	8	13,524	0
OCCIDENTAL CHEMICAL Total		0	8	0	8	13,524	0
ORIENT							
ANILINE		1,299	0	0	1,299	5	5,060
CHROMIUM COMPOUNDS		0	0	0	0	0	0
NITROBENZENE		107	0	0	107	1	0
ZINC COMPOUNDS		0	0	0	0	0	0
ORIENT Total		1,406	0	0	1,406	6	5,060
PERDUE BRIDGEVILLE							
BENZO(G,H,I)PERYLENE		0	0	0	0	0	0
COPPER COMPOUNDS	1	0	0	0	0	0	0
MANGANESE COMPOUNDS	1	0	0	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS		0	0	0	0	0	0
ZINC COMPOUNDS	1	0	0	0	0	0	0
PERDUE BRIDGEVILLE Total	3	0	0	0	0	0	0

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
PERDUE GEORGETOWN							
BENZO(G,H,I)PERYLENE		147	0	0	147	0	0
NITRATE COMPOUNDS		0	192,852	0	192,852	0	0
POLYCYCLIC AROMATIC COMPOUNDS		0	0	0	0	0	0
PERDUE GEORGETOWN Total		147	192,852	0	192,999	0	0
PERDUE MILFORD							
PERACETIC ACID		0	0	0	0	0	22,800
PERDUE MILFORD Total		0	0	0	0	0	22,800
PICTSWEET							
AMMONIA		2,000	0	0	2,000	0	0
PICTSWEET Total		2,000	0	0	2,000	0	0
PINNACLE FOODS							
BENZO(G,H,I)PERYLENE		0	0	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS		2	0	0	2	0	0
PINNACLE FOODS Total		2	0	0	2	0	0
PPG DOVER							
CERTAIN GLYCOL ETHERS		10	0	0	10	1,755	0
DIBUTYL PHTHALATE		0	0	0	0	5	0
ETHYLENE GLYCOL		5	0	0	5	3,026	0
ZINC COMPOUNDS		32	0	0	32	1,796	0
PPG DOVER Total		47	0	0	47	6,582	0
PREMCOR REFINING GROUP							
1,2,4-TRIMETHYLBENZENE		948	5	0	953	0	13,507
1,3-BUTADIENE		534	0	0	534	0	1,225
2,4-DIMETHYLPHENOL		0	147	0	147	0	206,622
AMMONIA		10,475	1,842	0	12,317	0	11,060,473
ANTHRACENE		10	5	0	15	0	0
BENZENE		10,590	5	0	10,595	3,567	158,343
BENZO(G,H,I)PERYLENE		2	4	0	6	0	404

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Source: DNREC 2009 TRI Database, October, 2010
A "1" in the Form A column indicates a Form A report

All Amounts Are in Pounds

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND				
CARBON DISULFIDE		784	0	0	784	0	3,242,543	
CARBONYL SULFIDE		19,937	0	0	19,937	0	7,775,340	
CRESOL (MIXED ISOMERS)		10	294	0	304	39	293,574	
CUMENE		399	5	0	404	0	1,448	
CYANIDE COMPOUNDS		867	1,118	0	1,985	0	216,212	
CYCLOHEXANE		1,029	5	0	1,034	0	5,983	
DIETHANOLAMINE		0	5	0	5	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS		0	0	0	0	0	0	
ETHYLBENZENE		2,031	5	0	2,036	30	14,952	
ETHYLENE		9,053	0	0	9,053	0	150,568	
ETHYLENE GLYCOL		10	242	0	252	0	23,935	
FORMIC ACID		0	5	0	5	0	212,749	
HYDROCHLORIC ACID		262	0	0	262	0	92,720	
HYDROGEN CYANIDE		661	651	0	1,312	0	169,996	
LEAD COMPOUNDS		101	21	0	122	1,579	0	
MERCURY COMPOUNDS		25	1	0	26	1	0	
MOLYBDENUM TRIOXIDE		0	0	0	0	32,098	0	
NAPHTHALENE		2,965	5	0	2,970	0	6,324	
N-HEXANE		10,435	5	0	10,440	0	60,787	
NICKEL COMPOUNDS		580	1,403	0	1,983	27,881	0	
NITRATE COMPOUNDS		0	1,336,142	0	1,336,142	0	0	
PHENANTHRENE		10	5	0	15	0	35	
PHENOL		295	147	0	442	0	327,364	
POLYCYCLIC AROMATIC COMPOUNDS		25	5	0	30	853	332	
PROPYLENE		62,512	0	0	62,512	0	295,199	
STYRENE		18	5	0	23	0	77	
SULFURIC ACID		81,589	0	0	81,589	0	0	
TERT-BUTYL ALCOHOL		4,517	0	0	4,517	0	0	
TETRACHLOROETHYLENE		71	0	0	71	0	0	
TOLUENE		17,265	5	0	17,270	39	119,892	
VANADIUM COMPOUNDS		372	11,134	0	11,506	22,149	0	
XYLENE (MIXED ISOMERS)		4,680	5	0	4,685	28	69,562	
PREMCO REFINING GROUP Total		243,062	1,353,221	0	1,596,283	88,264	24,520,166	

APPENDIX C

Source: DNREC 2009 TRI Database, October, 2010
A "1" in the Form A column indicates a Form A report

All Amounts Are in Pounds

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
PRINCE MINERALS							
BARIUM COMPOUNDS		5	0	0	5	0	0
LEAD COMPOUNDS		0	0	0	0	0	0
MANGANESE COMPOUNDS		136	0	0	136	0	0
NICKEL COMPOUNDS		0	0	0	0	0	0
PRINCE MINERALS Total		141	0	0	141	0	0
ROHM & HAAS B2 B3 B8							
DIISOCYANATES		0	0	0	0	30	0
N,N-DIMETHYLFORMAMIDE		4,130	0	0	4,130	468,662	3,219,984
PHTHALIC ANHYDRIDE		1	0	0	1	1,028	0
ROHM & HAAS B2 B3 B8 Total		4,131	0	0	4,131	469,720	3,219,984
ROHM & HAAS B5 B6							
4,4'-METHYLENEBIS(2-CHLOROANILINE)	1	0	0	0	0	0	0
DIISOCYANATES		2	0	0	2	7,225	0
N-METHYL-2-PYRROLIDONE		2,971	0	0	2,971	99,258	0
TOLUENE DIISOCYANATE (MIXED ISOMERS)		2	0	0	2	1,626	4,500
ROHM & HAAS B5 B6 Total	1	2,975	0	0	2,975	108,109	4,500
ROHM & HAAS B7 B15							
4,4'-METHYLENEBIS(2-CHLOROANILINE)	1	0	0	0	0	0	0
N-METHYL-2-PYRROLIDONE		2,710	0	0	2,710	9,117	0
ROHM & HAAS B7 B15 Total	1	2,710	0	0	2,710	9,117	0
SERVICE ENERGY DOVER							
1,2,4-TRIMETHYLBENZENE	1	0	0	0	0	0	0
TOLUENE	1	0	0	0	0	0	0
SERVICE ENERGY DOVER Total	2	0	0	0	0	0	0

APPENDIX C

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2009 ON-SITE RELEASES BY FACILITY AND CHEMICAL

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
SPI PHARMA							
CHLORINE	1	0	0	0	0	0	0
NITRIC ACID	1	0	0	0	0	0	0
SPI PHARMA Total	2	0	0	0	0	0	0
SUNOCO							
BENZENE		3,280	0	0	3,280	0	0
ETHYLENE		6,654	0	0	6,654	0	0
ETHYLENE OXIDE		684	0	0	684	0	0
N-HEXANE		797	0	0	797	0	0
TOLUENE		7	0	0	7	0	0
XYLENE (MIXED ISOMERS)		51	0	0	51	0	0
SUNOCO Total		11,473	0	0	11,473	0	0
V&S DELAWARE GALVANIZING, LLC							
LEAD		1	0	0	1	1,163	0
V&S DELAWARE GALVANIZING, LLC Total		1	0	0	1	1,163	0
VP RACING FUELS							
BENZENE	1	0	0	0	0	0	0
LEAD COMPOUNDS		0	0	0	0	9	0
METHANOL		155	0	0	155	1,491	0
TOLUENE		80	0	0	80	2,949	0
XYLENE (MIXED ISOMERS)	1	0	0	0	0	0	0
VP RACING FUELS Total	2	235	0	0	235	4,449	0
STATE TOTALS	29	3,183,506	1,590,477	537,489	5,311,472	11,233,287	58,479,292

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
AGILENT TECHNOLOGIES NEWPORT											
ACETONITRILE	0	0	18,540	0	0	18,540	0	0	0	0	
METHANOL	0	0	38,180	83	0	38,263	0	0	0	0	
TOLUENE	0	0	158,133	1,873	0	160,006	0	0	0	0	
AGILENT TECHNOLOGIES NEWPORT Total	0	0	214,853	1,956	0	216,809	0	0	0	0	
ALLEN'S HATCHERY DELMAR											
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ALLEN'S HATCHERY DELMAR Total	0	0	0	0	0	0	0	0	0	0	
ALLEN'S HATCHERY SEAFORD											
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ALLEN'S HATCHERY SEAFORD Total	0	0	0	0	0	0	0	0	0	0	
ARLON											
COPPER	0	920	0	0	200	1,120	0	0	0	0	
ETHYLBENZENE	0	0	0	460	0	460	0	0	19,000	19,000	
XYLENE (MIXED ISOMERS)	0	0	0	2,600	0	2,600	0	0	74,000	74,000	
ARLON Total	0	920	0	3,060	200	4,180	0	0	93,000	93,000	
BASF JOHNSON POLYMER											
AMMONIA	1,012	0	0	70	0	1,082	0	0	0	0	
BUTYL ACRYLATE	0	0	0	0	0	0	0	0	87	87	
CERTAIN GLYCOL ETHERS	0	0	0	795	0	795	0	0	0	0	
ETHYL ACRYLATE	0	0	0	0	0	0	0	0	18	18	
METHYL METHACRYLATE	0	0	0	0	0	0	0	0	422	422	
STYRENE	0	0	0	0	0	0	0	0	1,142	1,142	
BASF JOHNSON POLYMER Total	1,012	0	0	865	0	1,877	0	0	1,669	1,669	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
BUCK ALGONQUIN											
COPPER	0	0	0	0	0	0	0	0	0	0	
BUCK ALGONQUIN Total	0	0	0	0	0	0	0	0	0	0	
CAMDEL METALS											
CHROMIUM	0	31,433	0	0	84	31,517	0	0	0	0	
MANGANESE	0	3,190	0	0	8	3,198	0	0	0	0	
NICKEL	0	24,033	0	0	130	24,163	0	0	0	0	
TRICHLOROETHYLENE	0	0	0	7,340	0	7,340	0	0	0	0	
CAMDEL METALS Total	0	58,656	0	7,340	222	66,218	0	0	0	0	
CARL KING											
1,2,4-TRIMETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	0	0	
XYLENE (MIXED ISOMERS)	0	0	0	0	0	0	0	0	0	0	
CARL KING Total	0	0	0	0	0	0	0	0	0	0	
CHROME DEPOSIT											
LEAD COMPOUNDS	0	4,450	0	0	2,900	7,350	0	0	0	0	
CHROME DEPOSIT Total	0	4,450	0	0	2,900	7,350	0	0	0	0	
CIBA											
ANILINE	11,781	0	152,281	59,261	0	223,323	0	0	688	688	
BIPHENYL	25,808	0	97,293	37,539	63	160,703	0	0	2,321	2,321	
CYCLOHEXANE	0	11,925	0	0	0	11,925	0	0	3,151	3,151	
METHANOL	215,962	117,645	1,518	1,031	134	336,290	321,509	0	751,657	1,073,166	
NITRIC ACID	0	0	0	0	0	0	0	0	15,812	15,812	
N-METHYL-2-PYRROLIDONE	4,882	0	0	0	0	4,882	0	0	0	0	
P-CHLOROANILINE	1,798	0	1,386	598	28	3,810	0	0	457	457	
XYLENE (MIXED ISOMERS)	155	0	271	208	0	634	0	0	3,134	3,134	
CIBA Total	260,386	129,570	252,749	98,637	225	741,567	321,509	0	777,220	1,098,729	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
CLARIANT											
ZINC COMPOUNDS	2	0	0	0	1,507	1,509	0	0	0	0	
CLARIANT Total	2	0	0	0	1,507	1,509	0	0	0	0	
CRODA											
CERTAIN GLYCOL ETHERS	2,058	0	0	0	0	2,058	0	0	0	0	
DIETHANOLAMINE	154	0	0	0	3,670	3,824	0	0	0	0	
ETHYLENE OXIDE	0	0	0	0	0	0	0	0	0	0	
METHANOL	10,259	0	19,890	0	0	30,149	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	0	0	
PROPYLENE OXIDE	0	0	0	0	0	0	0	0	0	0	
CRODA Total	12,471	0	19,890	0	3,670	36,031	0	0	0	0	
DENTSPLY MAIN PLANT											
MERCURY	0	2,492	0	0	0	2,492	0	0	0	0	
DENTSPLY MAIN PLANT Total	0	2,492	0	0	0	2,492	0	0	0	0	
DENTSPLY WEST PLANT											
METHANOL	373	0	12,531	0	0	12,904	0	0	0	0	
METHYL METHACRYLATE	138	0	34,484	0	0	34,622	0	0	0	0	
TOLUENE	0	0	11,179	0	0	11,179	0	0	0	0	
DENTSPLY WEST PLANT Total	511	0	58,194	0	0	58,705	0	0	0	0	
DOVER AFB											
ETHYLBENZENE	0	0	0	0	0	0	0	0	0	0	
LEAD	0	0	0	0	0	0	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	0	0	
DOVER AFB Total	0	0	0	0	0	0	0	0	0	0	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
DUPONT EDGE MOOR											
ARSENIC COMPOUNDS	0	0	0	0	126	126	0	0	0	0	
BARIUM COMPOUNDS	0	1	0	0	21,198	21,199	0	0	0	0	
CARBONYL SULFIDE	0	0	0	0	0	0	0	0	0	0	
CHLORINE	0	0	0	0	0	0	0	0	2,209,709	2,209,709	
CHROMIUM COMPOUNDS	0	0	0	0	479,733	479,733	0	0	0	0	
COBALT COMPOUNDS	0	0	0	0	5,690	5,690	0	0	0	0	
CREOSOTE	0	0	0	0	0	0	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	2	2	0	0	0	0	
HEXACHLOROBENZENE	0	0	0	0	52	52	0	0	0	0	
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	17,000,990	17,000,990	
LEAD COMPOUNDS	0	0	0	0	36,594	36,595	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	1,734,309	1,734,309	0	0	0	0	
NICKEL COMPOUNDS	0	0	0	0	15,541	15,541	0	0	0	0	
OCTACHLOROSTYRENE	0	0	0	0	2	2	0	0	0	0	
PENTACHLOROBENZENE	0	0	0	0	2	2	0	0	0	0	
PHOSGENE	0	0	0	0	0	0	0	0	168,449	168,449	
POLYCHLORINATED BIPHENYLS	0	0	0	0	5	5	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
TITANIUM TETRACHLORIDE	0	0	0	0	0	0	0	0	1,958,151	1,958,151	
TOLUENE	0	78	0	0	0	78	0	0	0	0	
VANADIUM COMPOUNDS	0	0	0	0	277,441	277,441	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	27,395	27,395	0	0	0	0	
DUPONT EDGE MOOR Total	0	79	0	0	2,598,091	2,598,170	0	0	21,337,299	21,337,299	
DUPONT RED LION											
SULFURIC ACID	0	0	0	0	0	0	0	0	0	0	
DUPONT RED LION Total	0	0	0	0	0	0	0	0	0	0	
EAR											
DIISOCYANATES	0	0	0	805	0	805	0	0	0	0	
TOLUENE DIISOCYANATE (MIXED ISOMERS)	0	0	0	210	0	210	0	0	0	0	
EAR Total	0	0	0	1,015	0	1,015	0	0	0	0	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
EDGE MOOR/HAY ROAD POWER PLANTS											
AMMONIA	210	0	0	0	0	210	0	0	0	0	
BARIUM COMPOUNDS	0	0	0	0	44,567	44,567	0	0	0	0	
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ETHYLENE GLYCOL	0	0	0	0	27,869	27,869	0	0	0	0	
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	0	0	
HYDROGEN FLUORIDE	0	0	0	0	0	0	0	0	3,442	3,442	
LEAD COMPOUNDS	1	0	0	0	3,939	3,940	0	0	0	0	
MERCURY COMPOUNDS	0	0	0	0	93	93	0	0	0	0	
NITRATE COMPOUNDS	0	0	0	0	18,128	18,128	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
SULFURIC ACID	0	0	0	0	0	0	0	0	49,142	49,142	
VANADIUM COMPOUNDS	0	0	0	0	20,262	20,262	0	0	0	0	
EDGE MOOR/HAY ROAD POWER PLANTS Total	211	0	0	0	114,857	115,069	0	0	52,584	52,584	
EVRAZ CLAYMONT STEEL											
CHROMIUM COMPOUNDS	0	25,424	0	0	1,636	27,060	0	0	0	0	
COPPER COMPOUNDS	0	26,164	0	0	2,013	28,177	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
LEAD COMPOUNDS	0	136,580	0	0	64	136,644	0	0	0	0	
MANGANESE COMPOUNDS	0	149,745	0	0	7,262	157,007	0	0	0	0	
MERCURY COMPOUNDS	0	0	0	0	2	2	0	0	0	0	
NICKEL COMPOUNDS	0	4,204	0	0	1,099	5,303	0	0	0	0	
ZINC COMPOUNDS	0	1,061,378	0	0	146	1,061,524	0	0	0	0	
EVRAZ CLAYMONT STEEL Total	0	1,403,495	0	0	12,222	1,415,717	0	0	0	0	
FORMOSA PLASTICS											
AMMONIA	0	0	0	0	0	0	0	0	0	0	
VINYL ACETATE	0	0	0	0	0	0	0	0	0	0	
VINYL CHLORIDE	0	0	0	0	0	0	0	0	219,400	219,400	
FORMOSA PLASTICS Total	0	0	0	0	0	0	0	0	219,400	219,400	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	ENERGY					ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
FUJIFILM IMAGING COLORANTS										
NITRATE COMPOUNDS	1,164	0	548	0	0	1,712	0	0	0	0
FUJIFILM IMAGING COLORANTS Total	1,164	0	548	0	0	1,712	0	0	0	0
GAC										
1,2,4-TRIMETHYLBENZENE	0	0	0	0	0	0	0	0	0	0
GAC Total	0	0	0	0	0	0	0	0	0	0
HANESBRANDS										
NITRATE COMPOUNDS	75,564	0	0	0	0	75,564	0	0	0	0
HANESBRANDS Total	75,564	0	0	0	0	75,564	0	0	0	0
HANOVER FOODS										
AMMONIA	0	0	0	0	0	0	0	0	0	0
HANOVER FOODS Total	0	0	0	0	0	0	0	0	0	0
HIRSH INDUSTRIES										
CERTAIN GLYCOL ETHERS	0	0	0	0	0	0	0	0	0	0
HIRSH INDUSTRIES Total	0	0	0	0	0	0	0	0	0	0
HONEYWELL										
BORON TRIFLUORIDE	0	0	0	4	0	4	0	0	130,000	130,000
HYDROGEN FLUORIDE	0	0	0	0	0	0	0	0	130	130
METHANOL	60	0	0	0	0	60	0	0	60	60
N-HEXANE	10	0	25,300	390	0	25,700	169,000	0	25,000	194,000
HONEYWELL Total	70	0	25,300	394	0	25,764	169,000	0	155,190	324,190
IKO										
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	83	83	3	0	0	3
IKO Total	0	0	0	0	83	83	3	0	0	3

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
INDIAN RIVER POWER PLANT											
AMMONIA	0	0	0	0	0	0	0	0	3,574,624	3,574,624	
BARIUM COMPOUNDS	0	0	0	0	6	6	0	0	0	0	
BENZO(G,H,I)PERYLENE	0	0	1	0	0	1	0	0	0	0	
CHROMIUM COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	25,918	25,918	
HYDROGEN FLUORIDE	0	0	0	0	0	0	0	0	17,390	17,390	
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MERCURY COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	54	0	0	54	0	0	0	0	
SULFURIC ACID	0	0	0	0	0	0	0	0	267,435	267,435	
VANADIUM COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
INDIAN RIVER POWER PLANT Total	0	0	55	0	7	61	0	0	3,885,367	3,885,367	
INSTEEL WIRE											
LEAD COMPOUNDS	0	69	0	0	0	69	0	0	0	0	
INSTEEL WIRE Total	0	69	0	0	0	69	0	0	0	0	
INTERVET											
MERCURY COMPOUNDS	0	0	0	0	2	3	0	0	0	0	
INTERVET Total	0	0	0	0	2	3	0	0	0	0	
INVISTA											
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	3,800	3,800	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MERCURY COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
INVISTA Total	0	0	0	0	0	0	0	0	3,800	3,800	
JOHNSON CONTROLS											
ANTIMONY COMPOUNDS	0	12,462	0	0	0	12,462	0	0	0	0	
LEAD COMPOUNDS	1	3,354,616	0	0	140	3,354,757	0	0	0	0	
JOHNSON CONTROLS Total	1	3,367,078	0	0	140	3,367,219	0	0	0	0	
JUSTIN TANKS											
STYRENE	0	0	0	0	451	451	0	0	0	0	
JUSTIN TANKS Total	0	0	0	0	451	451	0	0	0	0	
KUEHNE CO											
CHLORINE	0	0	0	0	0	0	0	0	0	0	
KUEHNE CO Total	0	0	0	0	0	0	0	0	0	0	
MACDERMID											
TOLUENE DIISOCYANATE (MIXED ISOMERS)	0	0	0	0	0	0	0	0	643	643	
MACDERMID Total	0	0	0	0	0	0	0	0	643	643	
MEDAL											
METHANOL	0	0	0	17,000	0	17,000	1,014,650	0	0	1,014,650	
N-HEXANE	0	0	0	0	0	0	861,314	0	0	861,314	
N-METHYL-2-PYRROLIDONE	44,999	8,685	0	0	0	53,684	0	0	0	0	
MEDAL Total	44,999	8,685	0	17,000	0	70,684	1,875,964	0	0	1,875,964	
METAL MASTERS											
CHROMIUM	0	147,067	0	0	250	147,317	0	0	0	0	
NICKEL	0	47,377	0	0	250	47,627	0	0	0	0	
METAL MASTERS Total	0	194,444	0	0	500	194,944	0	0	0	0	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
MOTECH AMERICAS											
LEAD	0	130	0	0	7	137	0	0	0	0	
MOTECH AMERICAS Total	0	130	0	0	7	137	0	0	0	0	
MOUNTAIRE FARMS FRANKFORD FEED MILL											
ARSENIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MOUNTAIRE FARMS FRANKFORD FEED MILL Total	0	0	0	0	0	0	0	0	0	0	
MOUNTAIRE FARMS OF DELAWARE											
AMMONIA	0	0	0	0	0	0	0	0	29,743	29,743	
ARSENIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MOUNTAIRE FARMS OF DELAWARE Total	0	0	0	0	0	0	0	0	29,743	29,743	
MOUNTAIRE FARMS OF DELMARVA											
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MOUNTAIRE FARMS OF DELMARVA Total	0	0	0	0	0	0	0	0	0	0	
NORAMCO											
DICHLOROMETHANE	31,926	0	9,353	0	0	41,279	43,960	0	75,574	119,534	
FORMIC ACID	0	0	0	0	0	0	0	0	0	0	
METHANOL	19,695	0	374,217	0	0	393,912	0	0	393,913	393,913	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
N,N-DIMETHYLANILINE	18,572	0	0	0	0	18,572	0	0	0	0	
N-BUTYL ALCOHOL	21,018	0	399,356	0	0	420,374	0	0	420,375	420,375	
TOLUENE	5	0	654,713	0	0	654,718	0	0	814,569	814,569	
NORAMCO Total	91,216	0	1,437,639	0	0	1,528,855	43,960	0	1,704,431	1,748,391	
NRG DOVER											
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	0	0	
LEAD COMPOUNDS	0	0	0	0	96	96	0	0	0	0	
MERCURY COMPOUNDS	0	0	0	0	2	2	0	0	0	0	
SULFURIC ACID	0	0	0	0	0	0	0	0	36,000	36,000	
NRG DOVER Total	0	0	0	0	98	98	0	0	36,000	36,000	
OCCIDENTAL CHEMICAL											
MERCURY	0	21	0	0	13,503	13,524	0	0	0	0	
OCCIDENTAL CHEMICAL Total	0	21	0	0	13,503	13,524	0	0	0	0	
ORIENT											
ANILINE	5	0	0	0	0	5	0	0	5,060	5,060	
CHROMIUM COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
NITROBENZENE	1	0	0	0	0	1	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ORIENT Total	6	0	0	0	0	6	0	0	5,060	5,060	
PERDUE BRIDGEVILLE											
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
COPPER COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ZINC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
PERDUE BRIDGEVILLE Total	0	0	0	0	0	0	0	0	0	0	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
PERDUE GEORGETOWN											
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
NITRATE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
PERDUE GEORGETOWN Total	0	0	0	0	0	0	0	0	0	0	
PERDUE MILFORD											
PERACETIC ACID	0	0	0	0	0	0	0	0	22,800	22,800	
PERDUE MILFORD Total	0	0	0	0	0	0	0	0	22,800	22,800	
PICTSWEET											
AMMONIA	0	0	0	0	0	0	0	0	0	0	
PICTSWEET Total	0	0	0	0	0	0	0	0	0	0	
PINNACLE FOODS											
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	0	0	
POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
PINNACLE FOODS Total	0	0	0	0	0	0	0	0	0	0	
PPG DOVER											
CERTAIN GLYCOL ETHERS	750	0	0	5	1,000	1,755	0	0	0	0	
DIBUTYL PHTHALATE	5	0	0	0	0	5	0	0	0	0	
ETHYLENE GLYCOL	2,159	0	0	36	831	3,026	0	0	0	0	
ZINC COMPOUNDS	750	0	0	0	1,046	1,796	0	0	0	0	
PPG DOVER Total	3,664	0	0	41	2,877	6,582	0	0	0	0	
PREMCOR REFINING GROUP											
1,2,4-TRIMETHYLBENZENE	0	0	0	0	0	0	0	0	13,507	13,507	
1,3-BUTADIENE	0	0	0	0	0	0	0	0	1,225	1,225	
2,4-DIMETHYLPHENOL	0	0	0	0	0	0	0	0	206,622	206,622	
AMMONIA	0	0	0	0	0	0	0	11,053,726	6,747	11,060,473	
ANTHRACENE	0	0	0	0	0	0	0	0	0	0	
BENZENE	0	0	3,173	383	11	3,567	0	72,238	86,105	158,343	
BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0	404	404	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
CARBON DISULFIDE	0	0	0	0	0	0	0	3,242,543	0	3,242,543	
CARBONYL SULFIDE	0	0	0	0	0	0	0	0	7,775,340	7,775,340	
CRESOL (MIXED ISOMERS)	0	0	0	29	10	39	0	35,152	258,422	293,574	
CUMENE	0	0	0	0	0	0	0	0	1,448	1,448	
CYANIDE COMPOUNDS	0	0	0	0	0	0	0	105,579	110,633	216,212	
CYCLOHEXANE	0	0	0	0	0	0	0	0	5,983	5,983	
DIETHANOLAMINE	0	0	0	0	0	0	0	0	0	0	
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
ETHYLBENZENE	0	0	0	20	10	30	0	0	14,952	14,952	
ETHYLENE	0	0	0	0	0	0	0	0	150,568	150,568	
ETHYLENE GLYCOL	0	0	0	0	0	0	0	0	23,935	23,935	
FORMIC ACID	0	0	0	0	0	0	0	0	212,749	212,749	
HYDROCHLORIC ACID	0	0	0	0	0	0	0	0	92,720	92,720	
HYDROGEN CYANIDE	0	0	0	0	0	0	0	105,579	64,417	169,996	
LEAD COMPOUNDS	0	0	0	0	1,579	1,579	0	0	0	0	
MERCURY COMPOUNDS	0	1	0	0	0	1	0	0	0	0	
MOLYBDENUM TRIOXIDE	0	32,098	0	0	0	32,098	0	0	0	0	
NAPHTHALENE	0	0	0	0	0	0	0	0	6,324	6,324	
N-HEXANE	0	0	0	0	0	0	0	0	60,787	60,787	
NICKEL COMPOUNDS	0	17,716	0	0	10,165	27,881	0	0	0	0	
NITRATE COMPOUNDS	0	0	0	0	0	0	0	0	0	0	
PHENANTHRENE	0	0	0	0	0	0	0	0	35	35	
PHENOL	0	0	0	0	0	0	0	55,217	272,147	327,364	
POLYCYCLIC AROMATIC COMPOUNDS	0	853	0	0	0	853	0	0	332	332	
PROPYLENE	0	0	0	0	0	0	0	0	295,199	295,199	
STYRENE	0	0	0	0	0	0	0	0	77	77	
SULFURIC ACID	0	0	0	0	0	0	0	0	0	0	
TERT-BUTYL ALCOHOL	0	0	0	0	0	0	0	0	0	0	
TETRACHLOROETHYLENE	0	0	0	0	0	0	0	0	0	0	
TOLUENE	0	0	0	33	6	39	0	0	119,892	119,892	
VANADIUM COMPOUNDS	0	0	0	0	22,149	22,149	0	0	0	0	
XYLENE (MIXED ISOMERS)	0	0	0	26	2	28	0	0	69,562	69,562	
PREM COR REFINING GROUP Total	0	50,668	3,173	491	33,932	88,264	0	14,670,034	9,850,132	24,520,166	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	ENERGY					ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
PRINCE MINERALS										
BARIUM COMPOUNDS	0	0	0	0	0	0	0	0	0	0
LEAD COMPOUNDS	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0	0	0
NICKEL COMPOUNDS	0	0	0	0	0	0	0	0	0	0
PRINCE MINERALS Total	0	0	0	0	0	0	0	0	0	0
ROHM & HAAS B2 B3 B8										
DIISOCYANATES	0	0	30	0	0	30	0	0	0	0
N,N-DIMETHYLFORMAMIDE	144,297	0	324,148	217	0	468,662	3,219,683	0	301	3,219,984
PHTHALIC ANHYDRIDE	1,028	0	0	0	0	1,028	0	0	0	0
ROHM & HAAS B2 B3 B8 Total	145,325	0	324,178	217	0	469,720	3,219,683	0	301	3,219,984
ROHM & HAAS B5 B6										
4,4'-METHYLENEBIS(2-CHLOROANILINE)	0	0	0	0	0	0	0	0	0	0
DIISOCYANATES	0	0	0	7,225	0	7,225	0	0	0	0
N-METHYL-2-PYRROLIDONE	0	98,884	0	374	0	99,258	0	0	0	0
TOLUENE DIISOCYANATE (MIXED ISOMERS)	0	0	0	1,626	0	1,626	0	0	4,500	4,500
ROHM & HAAS B5 B6 Total	0	98,884	0	9,225	0	108,109	0	0	4,500	4,500
ROHM & HAAS B7 B15										
4,4'-METHYLENEBIS(2-CHLOROANILINE)	0	0	0	0	0	0	0	0	0	0
N-METHYL-2-PYRROLIDONE	0	9,110	0	7	0	9,117	0	0	0	0
ROHM & HAAS B7 B15 Total	0	9,110	0	7	0	9,117	0	0	0	0
SERVICE ENERGY DOVER										
1,2,4-TRIMETHYLBENZENE	0	0	0	0	0	0	0	0	0	0
TOLUENE	0	0	0	0	0	0	0	0	0	0
SERVICE ENERGY DOVER Total	0	0	0	0	0	0	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY FACILITY

	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	ENERGY						ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
SPI PHARMA											
CHLORINE	0	0	0	0	0	0	0	0	0	0	
NITRIC ACID	0	0	0	0	0	0	0	0	0	0	
SPI PHARMA Total	0	0	0	0	0	0	0	0	0	0	
SUNOCO											
BENZENE	0	0	0	0	0	0	0	0	0	0	
ETHYLENE	0	0	0	0	0	0	0	0	0	0	
ETHYLENE OXIDE	0	0	0	0	0	0	0	0	0	0	
N-HEXANE	0	0	0	0	0	0	0	0	0	0	
TOLUENE	0	0	0	0	0	0	0	0	0	0	
XYLENE (MIXED ISOMERS)	0	0	0	0	0	0	0	0	0	0	
SUNOCO Total	0	0	0	0	0	0	0	0	0	0	
V&S DELAWARE GALVANIZING, LLC											
LEAD	0	1,163	0	0	0	1,163	0	0	0	0	
V&S DELAWARE GALVANIZING, LLC Total	0	1,163	0	0	0	1,163	0	0	0	0	
VP RACING FUELS											
BENZENE	0	0	0	0	0	0	0	0	0	0	
LEAD COMPOUNDS	0	8	0	0	1	9	0	0	0	0	
METHANOL	0	1,470	0	0	21	1,491	0	0	0	0	
TOLUENE	0	2,941	0	0	8	2,949	0	0	0	0	
XYLENE (MIXED ISOMERS)	0	0	0	0	0	0	0	0	0	0	
VP RACING FUELS Total	0	4,419	0	0	30	4,449	0	0	0	0	
STATE TOTALS	636,602	5,334,333	2,336,579	140,248	2,785,524	11,233,287	5,630,119	14,670,034	38,179,139	58,479,292	

APPENDIX D

APPENDIX E

2009 ON-SITE RELEASE SUMMARY BY FACILITY

FACILITY - RANKED BY TOTAL ON-SITE RELEASE	ON-SITE RELEASES			TOTAL	TRANSFERS	ON-SITE
	TO AIR	TO WATER	TO LAND		OFF-SITE	WASTE MGMT.
INDIAN RIVER POWER PLANT	1,757,479	3,087	494,082	2,254,648	61	3,885,367
PREMCO REFINING GROUP	243,062	1,353,221	0	1,596,283	88,264	24,520,166
EDGE MOOR/HAY ROAD POWER PLANTS	561,653	841	0	562,494	115,069	52,584
DUPONT EDGE MOOR	244,441	40,038	7,115	291,594	2,598,170	21,337,299
PERDUE GEORGETOWN	147	192,852	0	192,999	0	0
NRG DOVER	117,124	0	0	117,124	98	36,000
FORMOSA PLASTICS	86,995	5	0	87,000	0	219,400
INVISTA	59,022	0	170	59,192	0	3,800
MOUNTAIRE FARMS OF DELAWARE	1,489	0	28,256	29,745	0	29,743
JUSTIN TANKS	16,680	0	0	16,680	451	0
CIBA	14,430	0	0	14,430	741,567	1,098,729
HIRSH INDUSTRIES	13,032	0	0	13,032	0	0
SUNOCO	11,473	0	0	11,473	0	0
EVRAZ CLAYMONT STEEL	1,839	415	7,866	10,121	1,415,717	0
HANOVER FOODS	10,001	0	0	10,001	0	0
DUPONT RED LION	6,632	0	0	6,632	0	0
BASF JOHNSON POLYMER	5,966	0	0	5,966	1,877	1,669
ROHM & HAAS B2 B3 B8	4,131	0	0	4,131	469,720	3,219,984
DENTSPLY WEST PLANT	3,358	0	0	3,358	58,705	0
CRODA	3,181	0	0	3,181	36,031	0
HONEYWELL	3,128	0	0	3,128	25,764	324,190
ROHM & HAAS B5 B6	2,975	0	0	2,975	108,109	4,500
ROHM & HAAS B7 B15	2,710	0	0	2,710	9,117	0
CAMDEL METALS	2,375	0	0	2,375	66,218	0
PICTSWEET	2,000	0	0	2,000	0	0
MEDAL	1,846	0	0	1,846	70,684	1,875,964
NORAMCO	1,435	0	0	1,435	1,528,855	1,748,391
ORIENT	1,406	0	0	1,406	6	5,060
ARLON	1,068	0	0	1,068	4,180	93,000
KUEHNE CO	1,000	0	0	1,000	0	0
AGILENT TECHNOLOGIES NEWPORT	524	0	0	524	216,809	0
DOVER AFB	265	0	0	265	0	0
VP RACING FUELS	235	0	0	235	4,449	0
JOHNSON CONTROLS	168	10	0	178	3,367,219	0
PRINCE MINERALS	141	0	0	141	0	0
PPG DOVER	47	0	0	47	6,582	0
MOUNTAIRE FARMS OF DELMARVA	23	0	0	23	0	0
OCCIDENTAL CHEMICAL	0.0	8.0	0.0	8.0	13,524	0

APPENDIX E

2009 ON-SITE RELEASE SUMMARY BY FACILITY

FACILITY - RANKED BY TOTAL ON-SITE RELEASE	ON-SITE RELEASES			TOTAL	TRANSFERS	ON-SITE
	TO AIR	TO WATER	TO LAND		OFF-SITE	WASTE MGMT.
MACDERMID	6.0	0.0	0.0	6.0	0	643
METAL MASTERS	5.5	0.0	0.0	5.5	194,944	0
CLARIANT	5.0	0.0	0.0	5.0	1,509	0
EAR	2.8	0.0	0.0	2.8	1,015	0
PINNACLE FOODS	2.0	0.0	0.0	2.0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	1.5	0.0	0.0	1.5	0	0
V&S DELAWARE GALVANIZING, LLC	1.0	0.0	0.2	1.1	1,163	0
DENTSPLY MAIN PLANT	0.02	0.00	0.00	0.02	2,492	0
ALLEN'S HATCHERY DELMAR	0	0	0	0	0	0
ALLEN'S HATCHERY SEAFORD	0	0	0	0	0	0
BUCK ALGONQUIN	0	0	0	0	0	0
CARL KING	0	0	0	0	0	0
CHROME DEPOSIT	0	0	0	0	7,350	0
FUJIFILM IMAGING COLORANTS	0	0	0	0	1,712	0
GAC	0	0	0	0	0	0
HANESBRANDS	0	0	0	0	75,564	0
IKO	0	0	0	0	83	3
INSTEEL WIRE	0	0	0	0	69	0
INTERVET	0	0	0	0	3	0
MOTECH AMERICAS	0	0	0	0	137	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0
PERDUE MILFORD	0	0	0	0	0	22,800
SERVICE ENERGY DOVER	0	0	0	0	0	0
SPI PHARMA	0	0	0	0	0	0
FACILITY TOTALS	3,183,506	1,590,477	537,489	5,311,472	11,233,287	58,479,292

APPENDIX F

2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
1,2,4-TRIMETHYLBENZENE							
CARL KING	1	0	0	0	0	0	0
GAC	1	0	0	0	0	0	0
PREMCOR REFINING GROUP		948	5	0	953	0	13,507
SERVICE ENERGY DOVER	1	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE Total	3	948	5	0	953	0	13,507
1,3-BUTADIENE							
PREMCOR REFINING GROUP		534	0	0	534	0	1,225
1,3-BUTADIENE Total		534	0	0	534	0	1,225
2,4-DIMETHYLPHENOL							
PREMCOR REFINING GROUP		0	147	0	147	0	206,622
2,4-DIMETHYLPHENOL Total		0	147	0	147	0	206,622
4,4'-METHYLENEBIS(2-CHLOROANILINE)							
ROHM & HAAS B5 B6	1	0	0	0	0	0	0
ROHM & HAAS B7 B15	1	0	0	0	0	0	0
4,4'-METHYLENEBIS(2-CHLOROANILINE) Total	2	0	0	0	0	0	0
ACETONITRILE							
AGILENT TECHNOLOGIES NEWPORT		160	0	0	160	18,540	0
ACETONITRILE Total		160	0	0	160	18,540	0
AMMONIA							
BASF JOHNSON POLYMER		4,949	0	0	4,949	1,082	0
EDGE MOOR/HAY ROAD POWER PLANTS		1,069	0	0	1,069	210	0
FORMOSA PLASTICS		11,252	0	0	11,252	0	0
HANOVER FOODS		10,001	0	0	10,001	0	0
INDIAN RIVER POWER PLANT		39,128	0	0	39,128	0	3,574,624
MOUNTAIRE FARMS OF DELAWARE		1,487	0	28,256	29,743	0	29,743
PICTSWEET		2,000	0	0	2,000	0	0
PREMCOR REFINING GROUP		10,475	1,842	0	12,317	0	11,060,473
AMMONIA Total		80,361	1,842	28,256	110,459	1,292	14,664,840

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
ANILINE							
CIBA		23	0	0	23	223,323	688
ORIENT		1,299	0	0	1,299	5	5,060
ANILINE Total		1,322	0	0	1,322	223,328	5,748
ANTHRACENE							
PREMCOR REFINING GROUP		10	5	0	15	0	0
ANTHRACENE Total		10	5	0	15	0	0
ANTIMONY COMPOUNDS							
JOHNSON CONTROLS		0	0	0	0	12,462	0
ANTIMONY COMPOUNDS Total		0	0	0	0	12,462	0
ARSENIC COMPOUNDS							
DUPONT EDGE MOOR		0	69	0	69	126	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	1	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	1	0	0	0	0	0	0
ARSENIC COMPOUNDS Total	2	0	69	0	69	126	0
BARIUM COMPOUNDS							
DUPONT EDGE MOOR		1	4,788	0	4,789	21,199	0
EDGE MOOR/HAY ROAD POWER PLANTS		2,195	489	0	2,684	44,567	0
INDIAN RIVER POWER PLANT		425	750	309,249	310,424	6	0
PRINCE MINERALS		5	0	0	5	0	0
BARIUM COMPOUNDS Total		2,625	6,027	309,249	317,901	65,772	0
BENZENE							
PREMCOR REFINING GROUP		10,590	5	0	10,595	3,567	158,343
SUNOCO		3,280	0	0	3,280	0	0
VP RACING FUELS	1	0	0	0	0	0	0
BENZENE Total	1	13,870	5	0	13,875	3,567	158,343

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
BENZO(G,H,I)PERYLENE							
EDGE MOOR/HAY ROAD POWER PLANTS		0	0	0	0	0	0
INDIAN RIVER POWER PLANT		0	0	0	0	1	0
INVISTA		0	0	0	0	0	0
MOUNTAIRE FARMS OF DELMARVA		1	0	0	1	0	0
PERDUE BRIDGEVILLE		0	0	0	0	0	0
PERDUE GEORGETOWN		147	0	0	147	0	0
PINNACLE FOODS		0	0	0	0	0	0
PREMCOR REFINING GROUP		2	4	0	6	0	404
BENZO(G,H,I)PERYLENE Total		150	4	0	154	1	404
BIPHENYL							
CIBA		74	0	0	74	160,703	2,321
BIPHENYL Total		74	0	0	74	160,703	2,321
BORON TRIFLUORIDE							
HONEYWELL		377	0	0	377	4	130,000
BORON TRIFLUORIDE Total		377	0	0	377	4	130,000
BUTYL ACRYLATE							
BASF JOHNSON POLYMER		183	0	0	183	0	87
BUTYL ACRYLATE Total		183	0	0	183	0	87
CARBON DISULFIDE							
PREMCOR REFINING GROUP		784	0	0	784	0	3,242,543
CARBON DISULFIDE Total		784	0	0	784	0	3,242,543
CARBONYL SULFIDE							
DUPONT EDGE MOOR		213,254	0	0	213,254	0	0
PREMCOR REFINING GROUP		19,937	0	0	19,937	0	7,775,340
CARBONYL SULFIDE Total		233,191	0	0	233,191	0	7,775,340

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
CERTAIN GLYCOL ETHERS							
BASF JOHNSON POLYMER		5	0	0	5	795	0
CRODA		16	0	0	16	2,058	0
HIRSH INDUSTRIES		13,032	0	0	13,032	0	0
PPG DOVER		10	0	0	10	1,755	0
CERTAIN GLYCOL ETHERS Total		13,063	0	0	13,063	4,608	0
CHLORINE							
DUPONT EDGE MOOR		5,231	0	0	5,231	0	2,209,709
KUEHNE CO		1,000	0	0	1,000	0	0
SPI PHARMA	1	0	0	0	0	0	0
CHLORINE Total	1	6,231	0	0	6,231	0	2,209,709
CHROMIUM							
CAMDEL METALS		0	0	0	0	31,517	0
METAL MASTERS		5	0	0	5	147,317	0
CHROMIUM Total		5	0	0	5	178,834	0
CHROMIUM COMPOUNDS							
DUPONT EDGE MOOR		0	43	0	43	479,733	0
EVRAZ CLAYMONT STEEL		79	4	106	189	27,060	0
INDIAN RIVER POWER PLANT		129	250	26,546	26,925	0	0
ORIENT		0	0	0	0	0	0
CHROMIUM COMPOUNDS Total		208	297	26,652	27,157	506,793	0
COBALT COMPOUNDS							
DUPONT EDGE MOOR		0	33	0	33	5,690	0
COBALT COMPOUNDS Total		0	33	0	33	5,690	0
COPPER							
ARLON		5	0	0	5	1,120	0
BUCK ALGONQUIN		0	0	0	0	0	0
COPPER Total		5	0	0	5	1,120	0

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
COPPER COMPOUNDS							
ALLEN'S HATCHERY DELMAR	1	0	0	0	0	0	0
ALLEN'S HATCHERY SEAFORD	1	0	0	0	0	0	0
EVRAZ CLAYMONT STEEL		98	74	266	438	28,177	0
INDIAN RIVER POWER PLANT		101	1,327	28,353	29,781	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	1	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	1	0	0	0	0	0	0
PERDUE BRIDGEVILLE	1	0	0	0	0	0	0
COPPER COMPOUNDS Total	5	199	1,401	28,619	30,219	28,177	0
CREOSOTE							
DUPONT EDGE MOOR		935	0	6,579	7,514	0	0
CREOSOTE Total		935	0	6,579	7,514	0	0
CRESOL (MIXED ISOMERS)							
PREMCOR REFINING GROUP		10	294	0	304	39	293,574
CRESOL (MIXED ISOMERS) Total		10	294	0	304	39	293,574
CUMENE							
PREMCOR REFINING GROUP		399	5	0	404	0	1,448
CUMENE Total		399	5	0	404	0	1,448
CYANIDE COMPOUNDS							
PREMCOR REFINING GROUP		867	1,118	0	1,985	0	216,212
CYANIDE COMPOUNDS Total		867	1,118	0	1,985	0	216,212
CYCLOHEXANE							
CIBA		27	0	0	27	11,925	3,151
PREMCOR REFINING GROUP		1,029	5	0	1,034	0	5,983
CYCLOHEXANE Total		1,056	5	0	1,061	11,925	9,134
DIBUTYL PHTHALATE							
PPG DOVER		0	0	0	0	5	0
DIBUTYL PHTHALATE Total		0	0	0	0	5	0

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
DICHLOROMETHANE							
NORAMCO		485	0	0	485	41,279	119,534
DICHLOROMETHANE Total		485	0	0	485	41,279	119,534
DIETHANOLAMINE							
CRODA		69	0	0	69	3,824	0
PREMCOR REFINING GROUP		0	5	0	5	0	0
DIETHANOLAMINE Total		69	5	0	74	3,824	0
DIISOCYANATES							
EAR		1	0	0	1	805	0
ROHM & HAAS B2 B3 B8		0	0	0	0	30	0
ROHM & HAAS B5 B6		2	0	0	2	7,225	0
DIISOCYANATES Total		3	0	0	3	8,060	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS							
DUPONT EDGE MOOR		0.000095	0.006207	0.000000	0.006303	2.143518	0.000000
EDGE MOOR/HAY ROAD POWER PLANTS		0.002703	0.000000	0.000000	0.002703	0.000000	0.000000
EVRAZ CLAYMONT STEEL		0.012393	0.000000	0.000000	0.012393	0.000000	0.000000
INDIAN RIVER POWER PLANT		0.000463	0.000000	0.000000	0.000463	0.000000	0.000000
INVISTA		0.000091	0.000000	0.000161	0.000252	0.000000	0.000000
PREMCOR REFINING GROUP		0.000761	0.000000	0.000000	0.000761	0.000000	0.000761
DIOXIN AND DIOXIN-LIKE COMPOUNDS Total		0.016507	0.006207	0.000161	0.022875	2.143518	0.000761
ETHYL ACRYLATE							
BASF JOHNSON POLYMER		210	0	0	210	0	18
ETHYL ACRYLATE Total		210	0	0	210	0	18
ETHYLBENZENE							
ARLON		209	0	0	209	460	19,000
DOVER AFB		70	0	0	70	0	0
PREMCOR REFINING GROUP		2,031	5	0	2,036	30	14,952
ETHYLBENZENE Total		2,310	5	0	2,315	490	33,952

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
ETHYLENE							
PREMCOR REFINING GROUP		9,053	0	0	9,053	0	150,568
SUNOCO		6,654	0	0	6,654	0	0
ETHYLENE Total		15,707	0	0	15,707	0	150,568
ETHYLENE GLYCOL							
EDGE MOOR/HAY ROAD POWER PLANTS		6,000	0	0	6,000	27,869	0
PPG DOVER		5	0	0	5	3,026	0
PREMCOR REFINING GROUP		10	242	0	252	0	23,935
ETHYLENE GLYCOL Total		6,015	242	0	6,257	30,895	23,935
ETHYLENE OXIDE							
CRODA		1,495	0	0	1,495	0	0
SUNOCO		684	0	0	684	0	0
ETHYLENE OXIDE Total		2,179	0	0	2,179	0	0
FORMIC ACID							
NORAMCO		5	0	0	5	0	0
PREMCOR REFINING GROUP		0	5	0	5	0	212,749
FORMIC ACID Total		5	5	0	10	0	212,749
HEXACHLOROBENZENE							
DUPONT EDGE MOOR		0	0	0	0	52	0
HEXACHLOROBENZENE Total		0	0	0	0	52	0
HYDROCHLORIC ACID							
DUPONT EDGE MOOR		23,226	0	0	23,226	0	17,000,990
EDGE MOOR/HAY ROAD POWER PLANTS		497,364	0	0	497,364	0	0
INDIAN RIVER POWER PLANT		1,511,338	0	0	1,511,338	0	25,918
INVISTA		59,000	0	0	59,000	0	3,800
NRG DOVER		108,386	0	0	108,386	0	0
PREMCOR REFINING GROUP		262	0	0	262	0	92,720
HYDROCHLORIC ACID Total		2,199,576	0	0	2,199,576	0	17,123,428

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
HYDROGEN CYANIDE							
PREMCOR REFINING GROUP		661	651	0	1,312	0	169,996
HYDROGEN CYANIDE Total		661	651	0	1,312	0	169,996
HYDROGEN FLUORIDE							
EDGE MOOR/HAY ROAD POWER PLANTS		30,575	0	0	30,575	0	3,442
HONEYWELL		547	0	0	547	0	130
INDIAN RIVER POWER PLANT		144,044	0	0	144,044	0	17,390
HYDROGEN FLUORIDE Total		175,166	0	0	175,166	0	20,962
LEAD							
DOVER AFB		84	0	0	84	0	0
MOTECH AMERICAS		0	0	0	0	137	0
V&S DELAWARE GALVANIZING, LLC		1	0	0	1	1,163	0
LEAD Total		85	0	0	85	1,300	0
LEAD COMPOUNDS							
CHROME DEPOSIT		0	0	0	0	7,350	0
DUPONT EDGE MOOR		0	57	0	57	36,595	0
EDGE MOOR/HAY ROAD POWER PLANTS		335	330	0	665	3,940	0
EVRAZ CLAYMONT STEEL		262	56	38	356	136,644	0
INDIAN RIVER POWER PLANT		107	0	17,251	17,358	0	0
INSTEEL WIRE		0	0	0	0	69	0
INVISTA		9	0	170	179	0	0
JOHNSON CONTROLS		168	10	0	178	3,354,757	0
NRG DOVER		2	0	0	2	96	0
PREMCOR REFINING GROUP		101	21	0	122	1,579	0
PRINCE MINERALS		0	0	0	0	0	0
VP RACING FUELS		0	0	0	0	9	0
LEAD COMPOUNDS Total		985	474	17,459	18,918	3,541,039	0
MANGANESE							
CAMDEL METALS		0	0	0	0	3,198	0
MANGANESE Total		0	0	0	0	3,198	0

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
MANGANESE COMPOUNDS							
ALLEN'S HATCHERY DELMAR	1	0	0	0	0	0	0
DUPONT EDGE MOOR		1	34,608	0	34,609	1,734,309	0
EVRAZ CLAYMONT STEEL		244	64	7,107	7,415	157,007	0
INDIAN RIVER POWER PLANT		191	5	47,060	47,256	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	1	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	1	0	0	0	0	0	0
PERDUE BRIDGEVILLE	1	0	0	0	0	0	0
PRINCE MINERALS		136	0	0	136	0	0
MANGANESE COMPOUNDS Total	4	571	34,677	54,167	89,415	1,891,316	0
MERCURY							
DENTSPLY MAIN PLANT		0	0	0	0	2,492	0
OCCIDENTAL CHEMICAL		0	8	0	8	13,524	0
MERCURY Total		0	8	0	8	16,016	0
MERCURY COMPOUNDS							
EDGE MOOR/HAY ROAD POWER PLANTS		7	0	0	7	93	0
EVRAZ CLAYMONT STEEL		59	0	0	59	2	0
INDIAN RIVER POWER PLANT		70	0	57	127	0	0
INTERVET		0	0	0	0	3	0
INVISTA		13	0	0	13	0	0
NRG DOVER		7	0	0	7	2	0
PREMCOR REFINING GROUP		25	1	0	26	1	0
MERCURY COMPOUNDS Total		182	1	57	240	100	0
METHANOL							
AGILENT TECHNOLOGIES NEWPORT		279	0	0	279	38,263	0
CIBA		13,626	0	0	13,626	336,290	1,073,166
CRODA		1,124	0	0	1,124	30,149	0
DENTSPLY WEST PLANT		0	0	0	0	12,904	0
HONEYWELL		4	0	0	4	60	60

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
MEDAL		386	0	0	386	17,000	1,014,650
NORAMCO		411	0	0	411	393,912	393,913
VP RACING FUELS		155	0	0	155	1,491	0
METHANOL Total		15,985	0	0	15,985	830,069	2,481,789
METHYL METHACRYLATE							
BASF JOHNSON POLYMER		266	0	0	266	0	422
DENTSPLY WEST PLANT		2,608	0	0	2,608	34,622	0
METHYL METHACRYLATE Total		2,874	0	0	2,874	34,622	422
MOLYBDENUM TRIOXIDE							
PREMCOR REFINING GROUP		0	0	0	0	32,098	0
MOLYBDENUM TRIOXIDE Total		0	0	0	0	32,098	0
N,N-DIMETHYLANILINE							
NORAMCO		0	0	0	0	18,572	0
N,N-DIMETHYLANILINE Total		0	0	0	0	18,572	0
N,N-DIMETHYLFORMAMIDE							
ROHM & HAAS B2 B3 B8		4,130	0	0	4,130	468,662	3,219,984
N,N-DIMETHYLFORMAMIDE Total		4,130	0	0	4,130	468,662	3,219,984
NAPHTHALENE							
CARL KING	1	0	0	0	0	0	0
CRODA		9	0	0	9	0	0
DOVER AFB		111	0	0	111	0	0
INDIAN RIVER POWER PLANT	1	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	1	0	0	0	0	0	0
PREMCOR REFINING GROUP		2,965	5	0	2,970	0	6,324
NAPHTHALENE Total	3	3,085	5	0	3,090	0	6,324
N-BUTYL ALCOHOL							
NORAMCO		10	0	0	10	420,374	420,375
N-BUTYL ALCOHOL Total		10	0	0	10	420,374	420,375

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND				
N-HEXANE								
HONEYWELL		2,200	0	0	2,200	25,700	194,000	
MEDAL		476	0	0	476	0	861,314	
PREMCOR REFINING GROUP		10,435	5	0	10,440	0	60,787	
SUNOCO		797	0	0	797	0	0	
N-HEXANE Total		13,908	5	0	13,913	25,700	1,116,101	
NICKEL								
CAMDEL METALS		0	0	0	0	24,163	0	
METAL MASTERS		1	0	0	1	47,627	0	
NICKEL Total		1	0	0	1	71,790	0	
NICKEL COMPOUNDS								
DUPONT EDGE MOOR		5	241	0	246	15,541	0	
EVRAZ CLAYMONT STEEL		22	39	191	252	5,303	0	
PREMCOR REFINING GROUP		580	1,403	0	1,983	27,881	0	
PRINCE MINERALS		0	0	0	0	0	0	
NICKEL COMPOUNDS Total		607	1,683	191	2,481	48,725	0	
NITRATE COMPOUNDS								
EDGE MOOR/HAY ROAD POWER PLANTS		0	22	0	22	18,128	0	
FUJIFILM IMAGING COLORANTS		0	0	0	0	1,712	0	
HANESBRANDS		0	0	0	0	75,564	0	
PERDUE GEORGETOWN		0	192,852	0	192,852	0	0	
PREMCOR REFINING GROUP		0	1,336,142	0	1,336,142	0	0	
NITRATE COMPOUNDS Total		0	1,529,016	0	1,529,016	95,404	0	
NITRIC ACID								
CIBA		0	0	0	0	0	15,812	
SPI PHARMA	1	0	0	0	0	0	0	
NITRIC ACID Total	1	0	0	0	0	0	15,812	
NITROBENZENE								
ORIENT		107	0	0	107	1	0	
NITROBENZENE Total		107	0	0	107	1	0	

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FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
N-METHYL-2-PYRROLIDONE							
CIBA		0	0	0	0	4,882	0
MEDAL		984	0	0	984	53,684	0
ROHM & HAAS B5 B6		2,971	0	0	2,971	99,258	0
ROHM & HAAS B7 B15		2,710	0	0	2,710	9,117	0
N-METHYL-2-PYRROLIDONE Total		6,665	0	0	6,665	166,941	0
OCTACHLOROSTYRENE							
DUPONT EDGE MOOR		0	0	0	0	2	0
OCTACHLOROSTYRENE Total		0	0	0	0	2	0
P-CHLOROANILINE							
CIBA		7	0	0	7	3,810	457
P-CHLOROANILINE Total		7	0	0	7	3,810	457
PENTACHLOROBENZENE							
DUPONT EDGE MOOR		0	0	0	0	2	0
PENTACHLOROBENZENE Total		0	0	0	0	2	0
PERACETIC ACID							
PERDUE MILFORD		0	0	0	0	0	22,800
PERACETIC ACID Total		0	0	0	0	0	22,800
PHENANTHRENE							
PREMCOR REFINING GROUP		10	5	0	15	0	35
PHENANTHRENE Total		10	5	0	15	0	35
PHENOL							
PREMCOR REFINING GROUP		295	147	0	442	0	327,364
PHENOL Total		295	147	0	442	0	327,364
PHOSGENE							
DUPONT EDGE MOOR		328	0	0	328	0	168,449
PHOSGENE Total		328	0	0	328	0	168,449

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
PHTHALIC ANHYDRIDE							
ROHM & HAAS B2 B3 B8		1	0	0	1	1,028	0
PHTHALIC ANHYDRIDE Total		1	0	0	1	1,028	0
POLYCHLORINATED BIPHENYLS							
DUPONT EDGE MOOR		0	0	0	0	5	0
POLYCHLORINATED BIPHENYLS Total		0	0	0	0	5	0
POLYCYCLIC AROMATIC COMPOUNDS							
DUPONT EDGE MOOR		77	0	536	613	0	0
EDGE MOOR/HAY ROAD POWER PLANTS		36	0	0	36	0	0
IKO		0	0	0	0	83	3
INDIAN RIVER POWER PLANT		1	0	0	1	54	0
INVISTA		0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL		1	0	0	1	0	0
MOUNTAIRE FARMS OF DELAWARE		2	0	0	2	0	0
MOUNTAIRE FARMS OF DELMARVA		23	0	0	23	0	0
PERDUE BRIDGEVILLE		0	0	0	0	0	0
PERDUE GEORGETOWN		0	0	0	0	0	0
PINNACLE FOODS		2	0	0	2	0	0
PREMCOR REFINING GROUP		25	5	0	30	853	332
POLYCYCLIC AROMATIC COMPOUNDS Total		167	5	536	708	990	335
PROPYLENE							
PREMCOR REFINING GROUP		62,512	0	0	62,512	0	295,199
PROPYLENE Total		62,512	0	0	62,512	0	295,199
PROPYLENE OXIDE							
CRODA		467	0	0	467	0	0
PROPYLENE OXIDE Total		467	0	0	467	0	0

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES			TOTAL	OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND			
STYRENE							
BASF JOHNSON POLYMER		353	0	0	353	0	1,142
JUSTIN TANKS		16,680	0	0	16,680	451	0
PREMCOR REFINING GROUP		18	5	0	23	0	77
STYRENE Total		17,051	5	0	17,056	451	1,219
SULFURIC ACID							
DUPONT RED LION		6,632	0	0	6,632	0	0
EDGE MOOR/HAY ROAD POWER PLANTS		23,826	0	0	23,826	0	49,142
INDIAN RIVER POWER PLANT		61,484	0	0	61,484	0	267,435
NRG DOVER		8,729	0	0	8,729	0	36,000
PREMCOR REFINING GROUP		81,589	0	0	81,589	0	0
SULFURIC ACID Total		182,260	0	0	182,260	0	352,577
TERT-BUTYL ALCOHOL							
PREMCOR REFINING GROUP		4,517	0	0	4,517	0	0
TERT-BUTYL ALCOHOL Total		4,517	0	0	4,517	0	0
TETRACHLOROETHYLENE							
PREMCOR REFINING GROUP		71	0	0	71	0	0
TETRACHLOROETHYLENE Total		71	0	0	71	0	0
TITANIUM TETRACHLORIDE							
DUPONT EDGE MOOR		18	0	0	18	0	1,958,151
TITANIUM TETRACHLORIDE Total		18	0	0	18	0	1,958,151
TOLUENE							
AGILENT TECHNOLOGIES NEWPORT		85	0	0	85	160,006	0
DENTSPLY WEST PLANT		750	0	0	750	11,179	0
DUPONT EDGE MOOR		1,353	0	0	1,353	78	0
NORAMCO		524	0	0	524	654,718	814,569

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT
		TO AIR	TO WATER	TO LAND	TOTAL		
PREMCOR REFINING GROUP		17,265	5	0	17,270	39	119,892
SERVICE ENERGY DOVER	1	0	0	0	0	0	0
SUNOCO		7	0	0	7	0	0
VP RACING FUELS		80	0	0	80	2,949	0
TOLUENE Total	1	20,064	5	0	20,069	828,969	934,461
TOLUENE DIISOCYANATE (MIXED ISOMERS)							
EAR		2	0	0	2	210	0
MACDERMID		6	0	0	6	0	643
ROHM & HAAS B5 B6		2	0	0	2	1,626	4,500
TOLUENE DIISOCYANATE (MIXED ISOMERS) Total		10	0	0	10	1,836	5,143
TRICHLOROETHYLENE							
CAMDEL METALS		2,375	0	0	2,375	7,340	0
TRICHLOROETHYLENE Total		2,375	0	0	2,375	7,340	0
VANADIUM COMPOUNDS							
DUPONT EDGE MOOR		2	54	0	56	277,441	0
EDGE MOOR/HAY ROAD POWER PLANTS		246	0	0	246	20,262	0
INDIAN RIVER POWER PLANT		133	5	44,533	44,671	0	0
PREMCOR REFINING GROUP		372	11,134	0	11,506	22,149	0
VANADIUM COMPOUNDS Total		753	11,193	44,533	56,479	319,852	0
VINYL ACETATE							
FORMOSA PLASTICS		31,943	0	0	31,943	0	0
VINYL ACETATE Total		31,943	0	0	31,943	0	0
VINYL CHLORIDE							
FORMOSA PLASTICS		43,800	5	0	43,805	0	219,400
VINYL CHLORIDE Total		43,800	5	0	43,805	0	219,400

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2009 ON-SITE RELEASES BY CHEMICAL AND FACILITY

FACILITY/CHEMICAL	FORM A	ON-SITE RELEASES				OFF-SITE TRANSFERS	ON-SITE WASTE MANAGEMENT	
		TO AIR	TO WATER	TO LAND	TOTAL			
XYLENE (MIXED ISOMERS)								
ARLON		854	0	0	854	2,600	74,000	
CARL KING	1	0	0	0	0	0	0	
CIBA		673	0	0	673	634	3,134	
PREMCOR REFINING GROUP		4,680	5	0	4,685	28	69,562	
SUNOCO		51	0	0	51	0	0	
VP RACING FUELS	1	0	0	0	0	0	0	
XYLENE (MIXED ISOMERS) Total	2	6,258	5	0	6,263	3,262	146,696	
ZINC COMPOUNDS								
ALLEN'S HATCHERY DELMAR	1	0	0	0	0	0	0	
CLARIANT		5	0	0	5	1,509	0	
DUPONT EDGE MOOR		10	145	0	155	27,395	0	
EVRAZ CLAYMONT STEEL		1,075	178	158	1,411	1,061,524	0	
INDIAN RIVER POWER PLANT		328	750	21,033	22,111	0	0	
MOUNTAIRE FARMS FRANKFORD FEED MILL	1	0	0	0	0	0	0	
MOUNTAIRE FARMS OF DELAWARE	1	0	0	0	0	0	0	
ORIENT		0	0	0	0	0	0	
PERDUE BRIDGEVILLE	1	0	0	0	0	0	0	
PPG DOVER		32	0	0	32	1,796	0	
ZINC COMPOUNDS Total	4	1,450	1,073	21,191	23,714	1,092,224	0	
STATE TOTALS		29	3,183,506	1,590,477	537,489	5,311,472	11,233,287	58,479,292

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
1,2,4-TRIMETHYLBENZENE										
CARL KING	0	0	0	0	0	0	0	0	0	0
GAC	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	13,507	13,507
SERVICE ENERGY DOVER	0	0	0	0	0	0	0	0	0	0
1,2,4-TRIMETHYLBENZENE Total	0	0	0	0	0	0	0	0	13,507	13,507
1,3-BUTADIENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	1,225	1,225
1,3-BUTADIENE Total	0	0	0	0	0	0	0	0	1,225	1,225
2,4-DIMETHYLPHENOL										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	206,622	206,622
2,4-DIMETHYLPHENOL Total	0	0	0	0	0	0	0	0	206,622	206,622
4,4'-METHYLENEBIS(2-CHLOROANILINE)										
ROHM & HAAS B5 B6	0	0	0	0	0	0	0	0	0	0
ROHM & HAAS B7 B15	0	0	0	0	0	0	0	0	0	0
4,4'-METHYLENEBIS(2-CHLOROANILINE) Total	0	0	0	0	0	0	0	0	0	0
ACETONITRILE										
AGILENT TECHNOLOGIES NEWPORT	0	0	18,540	0	0	18,540	0	0	0	0
ACETONITRILE Total	0	0	18,540	0	0	18,540	0	0	0	0
AMMONIA										
BASF JOHNSON POLYMER	1,012	0	0	70	0	1,082	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	210	0	0	0	0	210	0	0	0	0
FORMOSA PLASTICS	0	0	0	0	0	0	0	0	0	0
HANOVER FOODS	0	0	0	0	0	0	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	3,574,624	3,574,624
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	29,743	29,743
PICTSWEET	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	11,053,726	6,747	11,060,473
AMMONIA Total	1,222	0	0	70	0	1,292	0	11,053,726	3,611,114	14,664,840

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
ANILINE										
CIBA	11,781	0	152,281	59,261	0	223,323	0	0	688	688
ORIENT	5	0	0	0	0	5	0	0	5,060	5,060
ANILINE Total	11,786	0	152,281	59,261	0	223,328	0	0	5,748	5,748
ANTHRACENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
ANTHRACENE Total	0	0	0	0	0	0	0	0	0	0
ANTIMONY COMPOUNDS										
JOHNSON CONTROLS	0	12,462	0	0	0	12,462	0	0	0	0
ANTIMONY COMPOUNDS Total	0	12,462	0	0	0	12,462	0	0	0	0
ARSENIC COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	126	126	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
ARSENIC COMPOUNDS Total	0	0	0	0	126	126	0	0	0	0
BARIUM COMPOUNDS										
DUPONT EDGE MOOR	0	1	0	0	21,198	21,199	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	44,567	44,567	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	6	6	0	0	0	0
PRINCE MINERALS	0	0	0	0	0	0	0	0	0	0
BARIUM COMPOUNDS Total	0	1	0	0	65,771	65,772	0	0	0	0
BENZENE										
PREMCOR REFINING GROUP	0	0	3,173	383	11	3,567	0	72,238	86,105	158,343
SUNOCO	0	0	0	0	0	0	0	0	0	0
VP RACING FUELS	0	0	0	0	0	0	0	0	0	0
BENZENE Total	0	0	3,173	383	11	3,567	0	72,238	86,105	158,343

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
BENZO(G,H,I)PERYLENE										
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	1	0	0	1	0	0	0	0
INVISTA	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELMARVA	0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0	0	0	0	0
PERDUE GEORGETOWN	0	0	0	0	0	0	0	0	0	0
PINNACLE FOODS	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	404	404
BENZO(G,H,I)PERYLENE Total	0	0	1	0	0	1	0	0	404	404
BIPHENYL										
CIBA	25,808	0	97,293	37,539	63	160,703	0	0	2,321	2,321
BIPHENYL Total	25,808	0	97,293	37,539	63	160,703	0	0	2,321	2,321
BORON TRIFLUORIDE										
HONEYWELL	0	0	0	4	0	4	0	0	130,000	130,000
BORON TRIFLUORIDE Total	0	0	0	4	0	4	0	0	130,000	130,000
BUTYL ACRYLATE										
BASF JOHNSON POLYMER	0	0	0	0	0	0	0	0	87	87
BUTYL ACRYLATE Total	0	0	0	0	0	0	0	0	87	87
CARBON DISULFIDE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	3,242,543	0	3,242,543
CARBON DISULFIDE Total	0	0	0	0	0	0	0	3,242,543	0	3,242,543
CARBONYL SULFIDE										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	7,775,340	7,775,340
CARBONYL SULFIDE Total	0	0	0	0	0	0	0	0	7,775,340	7,775,340

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
CERTAIN GLYCOL ETHERS										
BASF JOHNSON POLYMER	0	0	0	795	0	795	0	0	0	0
CRODA	2,058	0	0	0	0	2,058	0	0	0	0
HIRSH INDUSTRIES	0	0	0	0	0	0	0	0	0	0
PPG DOVER	750	0	0	5	1,000	1,755	0	0	0	0
CERTAIN GLYCOL ETHERS Total	2,808	0	0	800	1,000	4,608	0	0	0	0
CHLORINE										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	2,209,709	2,209,709
KUEHNE CO	0	0	0	0	0	0	0	0	0	0
SPI PHARMA	0	0	0	0	0	0	0	0	0	0
CHLORINE Total	0	0	0	0	0	0	0	0	2,209,709	2,209,709
CHROMIUM										
CAMDEL METALS	0	31,433	0	0	84	31,517	0	0	0	0
METAL MASTERS	0	147,067	0	0	250	147,317	0	0	0	0
CHROMIUM Total	0	178,500	0	0	334	178,834	0	0	0	0
CHROMIUM COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	479,733	479,733	0	0	0	0
EVRAZ CLAYMONT STEEL	0	25,424	0	0	1,636	27,060	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
ORIENT	0	0	0	0	0	0	0	0	0	0
CHROMIUM COMPOUNDS Total	0	25,424	0	0	481,369	506,793	0	0	0	0
COBALT COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	5,690	5,690	0	0	0	0
COBALT COMPOUNDS Total	0	0	0	0	5,690	5,690	0	0	0	0
COPPER										
ARLON	0	920	0	0	200	1,120	0	0	0	0
BUCK ALGONQUIN	0	0	0	0	0	0	0	0	0	0
COPPER Total	0	920	0	0	200	1,120	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
COPPER COMPOUNDS										
ALLEN'S HATCHERY DELMAR	0	0	0	0	0	0	0	0	0	0
ALLEN'S HATCHERY SEAFORD	0	0	0	0	0	0	0	0	0	0
EVRAZ CLAYMONT STEEL	0	26,164	0	0	2,013	28,177	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0	0	0	0	0
COPPER COMPOUNDS Total	0	26,164	0	0	2,013	28,177	0	0	0	0
CREOSOTE										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	0	0
CREOSOTE Total	0	0	0	0	0	0	0	0	0	0
CRESOL (MIXED ISOMERS)										
PREMCOR REFINING GROUP	0	0	0	29	10	39	0	35,152	258,422	293,574
CRESOL (MIXED ISOMERS) Total	0	0	0	29	10	39	0	35,152	258,422	293,574
CUMENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	1,448	1,448
CUMENE Total	0	0	0	0	0	0	0	0	1,448	1,448
CYANIDE COMPOUNDS										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	105,579	110,633	216,212
CYANIDE COMPOUNDS Total	0	0	0	0	0	0	0	105,579	110,633	216,212
CYCLOHEXANE										
CIBA	0	11,925	0	0	0	11,925	0	0	3,151	3,151
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	5,983	5,983
CYCLOHEXANE Total	0	11,925	0	0	0	11,925	0	0	9,134	9,134
DIBUTYL PHTHALATE										
PPG DOVER	5	0	0	0	0	5	0	0	0	0
DIBUTYL PHTHALATE Total	5	0	0	0	0	5	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
DICHLOROMETHANE										
NORAMCO	31,926	0	9,353	0	0	41,279	43,960	0	75,574	119,534
DICHLOROMETHANE Total	31,926	0	9,353	0	0	41,279	43,960	0	75,574	119,534
DIETHANOLAMINE										
CRODA	154	0	0	0	3,670	3,824	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
DIETHANOLAMINE Total	154	0	0	0	3,670	3,824	0	0	0	0
DIISOCYANATES										
EAR	0	0	0	805	0	805	0	0	0	0
ROHM & HAAS B2 B3 B8	0	0	30	0	0	30	0	0	0	0
ROHM & HAAS B5 B6	0	0	0	7,225	0	7,225	0	0	0	0
DIISOCYANATES Total	0	0	30	8,030	0	8,060	0	0	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	2	2	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	0	0
EVRAZ CLAYMONT STEEL	0	0	0	0	0	0	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
INVISTA	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS Total	0	0	0	0	2	2	0	0	0	0
ETHYL ACRYLATE										
BASF JOHNSON POLYMER	0	0	0	0	0	0	0	0	18	18
ETHYL ACRYLATE Total	0	0	0	0	0	0	0	0	18	18
ETHYLBENZENE										
ARLON	0	0	0	460	0	460	0	0	19,000	19,000
DOVER AFB	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	20	10	30	0	0	14,952	14,952
ETHYLBENZENE Total	0	0	0	480	10	490	0	0	33,952	33,952

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
ETHYLENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	150,568	150,568
SUNOCO	0	0	0	0	0	0	0	0	0	0
ETHYLENE Total	0	0	0	0	0	0	0	0	150,568	150,568
ETHYLENE GLYCOL										
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	27,869	27,869	0	0	0	0
PPG DOVER	2,159	0	0	36	831	3,026	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	23,935	23,935
ETHYLENE GLYCOL Total	2,159	0	0	36	28,700	30,895	0	0	23,935	23,935
ETHYLENE OXIDE										
CRODA	0	0	0	0	0	0	0	0	0	0
SUNOCO	0	0	0	0	0	0	0	0	0	0
ETHYLENE OXIDE Total	0	0	0	0	0	0	0	0	0	0
FORMIC ACID										
NORAMCO	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	212,749	212,749
FORMIC ACID Total	0	0	0	0	0	0	0	0	212,749	212,749
HEXACHLOROENZENE										
DUPONT EDGE MOOR	0	0	0	0	52	52	0	0	0	0
HEXACHLOROENZENE Total	0	0	0	0	52	52	0	0	0	0
HYDROCHLORIC ACID										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	17,000,990	17,000,990
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	25,918	25,918
INVISTA	0	0	0	0	0	0	0	0	3,800	3,800
NRG DOVER	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	92,720	92,720
HYDROCHLORIC ACID Total	0	0	0	0	0	0	0	0	17,123,428	17,123,428

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
HYDROGEN CYANIDE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	105,579	64,417	169,996
HYDROGEN CYANIDE Total	0	0	0	0	0	0	0	105,579	64,417	169,996
HYDROGEN FLUORIDE										
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	3,442	3,442
HONEYWELL	0	0	0	0	0	0	0	0	130	130
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	17,390	17,390
HYDROGEN FLUORIDE Total	0	0	0	0	0	0	0	0	20,962	20,962
LEAD										
DOVER AFB	0	0	0	0	0	0	0	0	0	0
MOTECH AMERICAS	0	130	0	0	7	137	0	0	0	0
V&S DELAWARE GALVANIZING, LLC	0	1,163	0	0	0	1,163	0	0	0	0
LEAD Total	0	1,293	0	0	7	1,300	0	0	0	0
LEAD COMPOUNDS										
CHROME DEPOSIT	0	4,450	0	0	2,900	7,350	0	0	0	0
DUPONT EDGE MOOR	0	0	0	0	36,594	36,595	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	1	0	0	0	3,939	3,940	0	0	0	0
EVRAZ CLAYMONT STEEL	0	136,580	0	0	64	136,644	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
INSTEEL WIRE	0	69	0	0	0	69	0	0	0	0
INVISTA	0	0	0	0	0	0	0	0	0	0
JOHNSON CONTROLS	1	3,354,616	0	0	140	3,354,757	0	0	0	0
NRG DOVER	0	0	0	0	96	96	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	1,579	1,579	0	0	0	0
PRINCE MINERALS	0	0	0	0	0	0	0	0	0	0
VP RACING FUELS	0	8	0	0	1	9	0	0	0	0
LEAD COMPOUNDS Total	2	3,495,723	0	0	45,313	3,541,039	0	0	0	0
MANGANESE										
CAMDEL METALS	0	3,190	0	0	8	3,198	0	0	0	0
MANGANESE Total	0	3,190	0	0	8	3,198	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
MANGANESE COMPOUNDS										
ALLEN'S HATCHERY DELMAR	0	0	0	0	0	0	0	0	0	0
DUPONT EDGE MOOR	0	0	0	0	1,734,309	1,734,309	0	0	0	0
EVRAZ CLAYMONT STEEL	0	149,745	0	0	7,262	157,007	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0	0	0	0	0
PRINCE MINERALS	0	0	0	0	0	0	0	0	0	0
MANGANESE COMPOUNDS Total	0	149,745	0	0	1,741,571	1,891,316	0	0	0	0
MERCURY										
DENTSPLY MAIN PLANT	0	2,492	0	0	0	2,492	0	0	0	0
OCCIDENTAL CHEMICAL	0	21	0	0	13,503	13,524	0	0	0	0
MERCURY Total	0	2,513	0	0	13,503	16,016	0	0	0	0
MERCURY COMPOUNDS										
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	93	93	0	0	0	0
EVRAZ CLAYMONT STEEL	0	0	0	0	2	2	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
INTERVET	0	0	0	0	2	3	0	0	0	0
INVISTA	0	0	0	0	0	0	0	0	0	0
NRG DOVER	0	0	0	0	2	2	0	0	0	0
PREMCOR REFINING GROUP	0	1	0	0	0	1	0	0	0	0
MERCURY COMPOUNDS Total	0	1	0	0	98	100	0	0	0	0
METHANOL										
AGILENT TECHNOLOGIES NEWPORT	0	0	38,180	83	0	38,263	0	0	0	0
CIBA	215,962	117,645	1,518	1,031	134	336,290	321,509	0	751,657	1,073,166
CRODA	10,259	0	19,890	0	0	30,149	0	0	0	0
DENTSPLY WEST PLANT	373	0	12,531	0	0	12,904	0	0	0	0
HONEYWELL	60	0	0	0	0	60	0	0	60	60

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
MEDAL	0	0	0	17,000	0	17,000	1,014,650	0	0	1,014,650
NORAMCO	19,695	0	374,217	0	0	393,912	0	0	393,913	393,913
VP RACING FUELS	0	1,470	0	0	21	1,491	0	0	0	0
METHANOL Total	246,349	119,115	446,336	18,114	155	830,069	1,336,159	0	1,145,630	2,481,789
METHYL METHACRYLATE										
BASF JOHNSON POLYMER	0	0	0	0	0	0	0	0	422	422
DENTSPLY WEST PLANT	138	0	34,484	0	0	34,622	0	0	0	0
METHYL METHACRYLATE Total	138	0	34,484	0	0	34,622	0	0	422	422
MOLYBDENUM TRIOXIDE										
PREMCOR REFINING GROUP	0	32,098	0	0	0	32,098	0	0	0	0
MOLYBDENUM TRIOXIDE Total	0	32,098	0	0	0	32,098	0	0	0	0
N,N-DIMETHYLANILINE										
NORAMCO	18,572	0	0	0	0	18,572	0	0	0	0
N,N-DIMETHYLANILINE Total	18,572	0	0	0	0	18,572	0	0	0	0
N,N-DIMETHYLFORMAMIDE										
ROHM & HAAS B2 B3 B8	144,297	0	324,148	217	0	468,662	3,219,683	0	301	3,219,984
N,N-DIMETHYLFORMAMIDE Total	144,297	0	324,148	217	0	468,662	3,219,683	0	301	3,219,984
NAPHTHALENE										
CARL KING	0	0	0	0	0	0	0	0	0	0
CRODA	0	0	0	0	0	0	0	0	0	0
DOVER AFB	0	0	0	0	0	0	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	6,324	6,324
NAPHTHALENE Total	0	0	0	0	0	0	0	0	6,324	6,324
N-BUTYL ALCOHOL										
NORAMCO	21,018	0	399,356	0	0	420,374	0	0	420,375	420,375
N-BUTYL ALCOHOL Total	21,018	0	399,356	0	0	420,374	0	0	420,375	420,375

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	ENERGY					ENERGY				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
N-HEXANE										
HONEYWELL	10	0	25,300	390	0	25,700	169,000	0	25,000	194,000
MEDAL	0	0	0	0	0	0	861,314	0	0	861,314
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	60,787	60,787
SUNOCO	0	0	0	0	0	0	0	0	0	0
N-HEXANE Total	10	0	25,300	390	0	25,700	1,030,314	0	85,787	1,116,101
NICKEL										
CAMDEL METALS	0	24,033	0	0	130	24,163	0	0	0	0
METAL MASTERS	0	47,377	0	0	250	47,627	0	0	0	0
NICKEL Total	0	71,410	0	0	380	71,790	0	0	0	0
NICKEL COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	15,541	15,541	0	0	0	0
EVRAZ CLAYMONT STEEL	0	4,204	0	0	1,099	5,303	0	0	0	0
PREMCOR REFINING GROUP	0	17,716	0	0	10,165	27,881	0	0	0	0
PRINCE MINERALS	0	0	0	0	0	0	0	0	0	0
NICKEL COMPOUNDS Total	0	21,920	0	0	26,805	48,725	0	0	0	0
NITRATE COMPOUNDS										
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	18,128	18,128	0	0	0	0
FUJIFILM IMAGING COLORANTS	1,164	0	548	0	0	1,712	0	0	0	0
HANESBRANDS	75,564	0	0	0	0	75,564	0	0	0	0
PERDUE GEORGETOWN	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
NITRATE COMPOUNDS Total	76,728	0	548	0	18,128	95,404	0	0	0	0
NITRIC ACID										
CIBA	0	0	0	0	0	0	0	0	15,812	15,812
SPI PHARMA	0	0	0	0	0	0	0	0	0	0
NITRIC ACID Total	0	0	0	0	0	0	0	0	15,812	15,812
NITROBENZENE										
ORIENT	1	0	0	0	0	1	0	0	0	0
NITROBENZENE Total	1	0	0	0	0	1	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					TOTAL	ON SITE WASTE MANAGEMENT			
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL		RECYCLE	RECOVERY	TREATMENT	TOTAL
N-METHYL-2-PYRROLIDONE										
CIBA	4,882	0	0	0	0	4,882	0	0	0	0
MEDAL	44,999	8,685	0	0	0	53,684	0	0	0	0
ROHM & HAAS B5 B6	0	98,884	0	374	0	99,258	0	0	0	0
ROHM & HAAS B7 B15	0	9,110	0	7	0	9,117	0	0	0	0
N-METHYL-2-PYRROLIDONE Total	49,881	116,679	0	381	0	166,941	0	0	0	0
OCTACHLOROSTYRENE										
DUPONT EDGE MOOR	0	0	0	0	2	2	0	0	0	0
OCTACHLOROSTYRENE Total	0	0	0	0	2	2	0	0	0	0
P-CHLOROANILINE										
CIBA	1,798	0	1,386	598	28	3,810	0	0	457	457
P-CHLOROANILINE Total	1,798	0	1,386	598	28	3,810	0	0	457	457
PENTACHLOROBENZENE										
DUPONT EDGE MOOR	0	0	0	0	2	2	0	0	0	0
PENTACHLOROBENZENE Total	0	0	0	0	2	2	0	0	0	0
PERACETIC ACID										
PERDUE MILFORD	0	0	0	0	0	0	0	0	22,800	22,800
PERACETIC ACID Total	0	0	0	0	0	0	0	0	22,800	22,800
PHENANTHRENE										
PREMCO REFINING GROUP	0	0	0	0	0	0	0	0	35	35
PHENANTHRENE Total	0	0	0	0	0	0	0	0	35	35
PHENOL										
PREMCO REFINING GROUP	0	0	0	0	0	0	0	55,217	272,147	327,364
PHENOL Total	0	0	0	0	0	0	0	55,217	272,147	327,364
PHOSGENE										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	168,449	168,449
PHOSGENE Total	0	0	0	0	0	0	0	0	168,449	168,449

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
PHTHALIC ANHYDRIDE										
ROHM & HAAS B2 B3 B8	1,028	0	0	0	0	1,028	0	0	0	0
PHTHALIC ANHYDRIDE Total	1,028	0	0	0	0	1,028	0	0	0	0
POLYCHLORINATED BIPHENYLS										
DUPONT EDGE MOOR	0	0	0	0	5	5	0	0	0	0
POLYCHLORINATED BIPHENYLS Total	0	0	0	0	5	5	0	0	0	0
POLYCYCLIC AROMATIC COMPOUNDS										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	0	0
IKO	0	0	0	0	83	83	3	0	0	3
INDIAN RIVER POWER PLANT	0	0	54	0	0	54	0	0	0	0
INVISTA	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELMARVA	0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0	0	0	0	0
PERDUE GEORGETOWN	0	0	0	0	0	0	0	0	0	0
PINNACLE FOODS	0	0	0	0	0	0	0	0	0	0
PREMCOR REFINING GROUP	0	853	0	0	0	853	0	0	332	332
POLYCYCLIC AROMATIC COMPOUNDS Total	0	853	54	0	83	990	3	0	332	335
PROPYLENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	295,199	295,199
PROPYLENE Total	0	0	0	0	0	0	0	0	295,199	295,199
PROPYLENE OXIDE										
CRODA	0	0	0	0	0	0	0	0	0	0
PROPYLENE OXIDE Total	0	0	0	0	0	0	0	0	0	0

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
STYRENE										
BASF JOHNSON POLYMER	0	0	0	0	0	0	0	0	1,142	1,142
JUSTIN TANKS	0	0	0	0	451	451	0	0	0	0
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	77	77
STYRENE Total	0	0	0	0	451	451	0	0	1,219	1,219
SULFURIC ACID										
DUPONT RED LION	0	0	0	0	0	0	0	0	0	0
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	0	0	0	0	49,142	49,142
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	267,435	267,435
NRG DOVER	0	0	0	0	0	0	0	0	36,000	36,000
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
SULFURIC ACID Total	0	0	0	0	0	0	0	0	352,577	352,577
TERT-BUTYL ALCOHOL										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
TERT-BUTYL ALCOHOL Total	0	0	0	0	0	0	0	0	0	0
TETRACHLOROETHYLENE										
PREMCOR REFINING GROUP	0	0	0	0	0	0	0	0	0	0
TETRACHLOROETHYLENE Total	0	0	0	0	0	0	0	0	0	0
TITANIUM TETRACHLORIDE										
DUPONT EDGE MOOR	0	0	0	0	0	0	0	0	1,958,151	1,958,151
TITANIUM TETRACHLORIDE Total	0	0	0	0	0	0	0	0	1,958,151	1,958,151
TOLUENE										
AGILENT TECHNOLOGIES NEWPORT	0	0	158,133	1,873	0	160,006	0	0	0	0
DENTSPLY WEST PLANT	0	0	11,179	0	0	11,179	0	0	0	0
DUPONT EDGE MOOR	0	78	0	0	0	78	0	0	0	0
NORAMCO	5	0	654,713	0	0	654,718	0	0	814,569	814,569

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS						ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL	
PREMCOR REFINING GROUP	0	0	0	33	6	39	0	0	119,892	119,892	
SERVICE ENERGY DOVER	0	0	0	0	0	0	0	0	0	0	
SUNOCO	0	0	0	0	0	0	0	0	0	0	
VP RACING FUELS	0	2,941	0	0	8	2,949	0	0	0	0	
TOLUENE Total	5	3,019	824,025	1,906	14	828,969	0	0	934,461	934,461	
TOLUENE DIISOCYANATE (MIXED ISOMERS)											
EAR	0	0	0	210	0	210	0	0	0	0	
MACDERMID	0	0	0	0	0	0	0	0	643	643	
ROHM & HAAS B5 B6	0	0	0	1,626	0	1,626	0	0	4,500	4,500	
TOLUENE DIISOCYANATE (MIXED ISOMERS) Total	0	0	0	1,836	0	1,836	0	0	5,143	5,143	
TRICHLOROETHYLENE											
CAMDEL METALS	0	0	0	7,340	0	7,340	0	0	0	0	
TRICHLOROETHYLENE Total	0	0	0	7,340	0	7,340	0	0	0	0	
VANADIUM COMPOUNDS											
DUPONT EDGE MOOR	0	0	0	0	277,441	277,441	0	0	0	0	
EDGE MOOR/HAY ROAD POWER PLANTS	0	0	0	0	20,262	20,262	0	0	0	0	
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0	
PREMCOR REFINING GROUP	0	0	0	0	22,149	22,149	0	0	0	0	
VANADIUM COMPOUNDS Total	0	0	0	0	319,852	319,852	0	0	0	0	
VINYL ACETATE											
FORMOSA PLASTICS	0	0	0	0	0	0	0	0	0	0	
VINYL ACETATE Total	0	0	0	0	0	0	0	0	0	0	
VINYL CHLORIDE											
FORMOSA PLASTICS	0	0	0	0	0	0	0	0	219,400	219,400	
VINYL CHLORIDE Total	0	0	0	0	0	0	0	0	219,400	219,400	

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2009 OFF-SITE TRANSFERS AND WASTE MANAGED ON-SITE BY CHEMICAL

CHEMICAL/FACILITY	OFF SITE TRANSFERS					ON SITE WASTE MANAGEMENT				
	POTW	RECYCLE	RECOVERY	TREATMENT	DISPOSAL	TOTAL	RECYCLE	RECOVERY	TREATMENT	TOTAL
XYLENE (MIXED ISOMERS)										
ARLON	0	0	0	2,600	0	2,600	0	0	74,000	74,000
CARL KING	0	0	0	0	0	0	0	0	0	0
CIBA	155	0	271	208	0	634	0	0	3,134	3,134
PREMCOR REFINING GROUP	0	0	0	26	2	28	0	0	69,562	69,562
SUNOCO	0	0	0	0	0	0	0	0	0	0
VP RACING FUELS	0	0	0	0	0	0	0	0	0	0
XYLENE (MIXED ISOMERS) Total	155	0	271	2,834	2	3,262	0	0	146,696	146,696
ZINC COMPOUNDS										
ALLEN'S HATCHERY DELMAR	0	0	0	0	0	0	0	0	0	0
CLARIANT	2	0	0	0	1,507	1,509	0	0	0	0
DUPONT EDGE MOOR	0	0	0	0	27,395	27,395	0	0	0	0
EVRAZ CLAYMONT STEEL	0	1,061,378	0	0	146	1,061,524	0	0	0	0
INDIAN RIVER POWER PLANT	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS FRANKFORD FEED MILL	0	0	0	0	0	0	0	0	0	0
MOUNTAIRE FARMS OF DELAWARE	0	0	0	0	0	0	0	0	0	0
ORIENT	0	0	0	0	0	0	0	0	0	0
PERDUE BRIDGEVILLE	0	0	0	0	0	0	0	0	0	0
PPG DOVER	750	0	0	0	1,046	1,796	0	0	0	0
ZINC COMPOUNDS Total	752	1,061,378	0	0	30,094	1,092,224	0	0	0	0
STATE TOTALS	636,602	5,334,333	2,336,579	140,248	2,785,524	11,233,287	5,630,119	14,670,034	38,179,139	58,479,292

APPENDIX G

APPENDIX H

2009 ON-SITE RELEASE SUMMARY BY CHEMICAL

CHEMICAL - RANKED BY TOTAL ON-SITE RELEASE	ON-SITE RELEASES			TOTAL	TRANSFERS	ON-SITE WASTE MGMT.
	TO AIR	TO WATER	TO LAND		OFF SITE	
HYDROCHLORIC ACID	2,199,576	0	0	2,199,576	0	17,123,428
NITRATE COMPOUNDS	0	1,529,016	0	1,529,016	95,404	0
BARIUM COMPOUNDS	2,625	6,027	309,249	317,901	65,772	0
CARBONYL SULFIDE	233,191	0	0	233,191	0	7,775,340
SULFURIC ACID	182,260	0	0	182,260	0	352,577
HYDROGEN FLUORIDE	175,166	0	0	175,166	0	20,962
AMMONIA	80,361	1,842	28,256	110,459	1,292	14,664,840
MANGANESE COMPOUNDS	571	34,677	54,167	89,415	1,891,316	0
PROPYLENE	62,512	0	0	62,512	0	295,199
VANADIUM COMPOUNDS	753	11,193	44,533	56,479	319,852	0
VINYL CHLORIDE	43,800	5	0	43,805	0	219,400
VINYL ACETATE	31,943	0	0	31,943	0	0
COPPER COMPOUNDS	199	1,401	28,619	30,219	28,177	0
CHROMIUM COMPOUNDS	208	297	26,652	27,157	506,793	0
ZINC COMPOUNDS	1,450	1,073	21,191	23,714	1,092,224	0
TOLUENE	20,064	5	0	20,069	828,969	934,461
LEAD COMPOUNDS	985	474	17,459	18,918	3,541,039	0
STYRENE	17,051	5	0	17,056	451	1,219
METHANOL	15,985	0	0	15,985	830,069	2,481,789
ETHYLENE	15,707	0	0	15,707	0	150,568
BENZENE	13,870	5	0	13,875	3,567	158,343
N-HEXANE	13,908	5	0	13,913	25,700	1,116,101
CERTAIN GLYCOL ETHERS	13,063	0	0	13,063	4,608	0
CREOSOTE	935	0	6,579	7,514	0	0
N-METHYL-2-PYRROLIDONE	6,665	0	0	6,665	166,941	0
XYLENE (MIXED ISOMERS)	6,258	5	0	6,263	3,262	146,696
ETHYLENE GLYCOL	6,015	242	0	6,257	30,895	23,935
CHLORINE	6,231	0	0	6,231	0	2,209,709
TERT-BUTYL ALCOHOL	4,517	0	0	4,517	0	0
N,N-DIMETHYLFORMAMIDE	4,130	0	0	4,130	468,662	3,219,984
NAPHTHALENE	3,085	5	0	3,090	0	6,324
METHYL METHACRYLATE	2,874	0	0	2,874	34,622	422
NICKEL COMPOUNDS	607	1,683	191	2,481	48,725	0
TRICHLOROETHYLENE	2,375	0	0	2,375	7,340	0
ETHYLBENZENE	2,310	5	0	2,315	490	33,952
ETHYLENE OXIDE	2,179	0	0	2,179	0	0
CYANIDE COMPOUNDS	867	1,118	0	1,985	0	216,212
ANILINE	1,322	0	0	1,322	223,328	5,748
HYDROGEN CYANIDE	661	651	0	1,312	0	169,996
CYCLOHEXANE	1,056	5	0	1,061	11,925	9,134
1,2,4-TRIMETHYLBENZENE	948	5	0	953	0	13,507
CARBON DISULFIDE	784	0	0	784	0	3,242,543
POLYCYCLIC AROMATIC COMPOUNDS	167	5	536	708	990	335
1,3-BUTADIENE	534	0	0	534	0	1,225
DICHLOROMETHANE	485	0	0	485	41,279	119,534
PROPYLENE OXIDE	467	0	0	467	0	0

APPENDIX H

2009 ON-SITE RELEASE SUMMARY BY CHEMICAL

CHEMICAL - RANKED BY TOTAL ON-SITE RELEASE	ON-SITE RELEASES			TOTAL	TRANSFERS	ON-SITE WASTE MGMT.
	TO AIR	TO WATER	TO LAND		OFF SITE	
PHENOL	295	147	0	442	0	327,364
CUMENE	399	5	0	404	0	1,448
BORON TRIFLUORIDE	377	0	0	377	4	130,000
PHOSGENE	328	0	0	328	0	168,449
CRESOL (MIXED ISOMERS)	10	294	0	304	39	293,574
MERCURY COMPOUNDS	182	1	57	240	100	0
ETHYL ACRYLATE	210	0	0	210	0	18
BUTYL ACRYLATE	183	0	0	183	0	87
ACETONITRILE	160	0	0	160	18,540	0
BENZO(G,H,I)PERYLENE	150	4	0	154	1	404
2,4-DIMETHYLPHENOL	0	147	0	147	0	206,622
NITROBENZENE	107	0	0	107	1	0
LEAD	85	0	0	85	1,300	0
DIETHANOLAMINE	69	5	0	74	3,824	0
BIPHENYL	74	0	0	74	160,703	2,321
TETRACHLOROETHYLENE	71	0	0	71	0	0
ARSENIC COMPOUNDS	0	69	0	69	126	0
COBALT COMPOUNDS	0	33	0	33	5,690	0
TITANIUM TETRACHLORIDE	18	0	0	18	0	1,958,151
ANTHRACENE	10	5	0	15	0	0
PHENANTHRENE	10	5	0	15	0	35
FORMIC ACID	5	5	0	10	0	212,749
N-BUTYL ALCOHOL	10	0	0	10	420,374	420,375
TOLUENE DIISOCYANATE (MIXED ISOMERS)	10	0	0	10	1,836	5,143
MERCURY	0.0	8.0	0.0	8.0	16,016	0
P-CHLOROANILINE	7.0	0.0	0.0	7.0	3,810	457
CHROMIUM	5.0	0.0	0.0	5.0	178,834	0
COPPER	5.0	0.0	0.0	5.0	1,120	0
DIISOCYANATES	2.8	0.0	0.0	2.8	8,060	0
PHTHALIC ANHYDRIDE	1.0	0.0	0.0	1.0	1,028	0
NICKEL	0.50	0.00	0.00	0.50	71,790	0
HEXACHLOROENZENE	0.10	0.10	0.00	0.20	52	0
PENTACHLOROENZENE	0.11	0.00	0.00	0.11	1.90	0.00
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.0165	0.0062	0.0002	0.0229	2.1435	0.0008
POLYCHLORINATED BIPHENYLS	0.0100	0.0000	0.0000	0.0100	5.1000	0.0000
4,4'-METHYLENEBIS(2-CHLOROANILINE)	0	0	0	0	0	0
ANTIMONY COMPOUNDS	0	0	0	0	12,462	0
DIBUTYL PHTHALATE	0	0	0	0	5	0
MANGANESE	0	0	0	0	3,198	0
MOLYBDENUM TRIOXIDE	0	0	0	0	32,098	0
N,N-DIMETHYLANILINE	0	0	0	0	18,572	0
NITRIC ACID	0	0	0	0	0	15,812
OCTACHLOROSTYRENE	0	0	0	0	2	0
PERACETIC ACID	0	0	0	0	0	22,800
STATE TOTALS	3,183,506	1,590,477	537,489	5,311,472	11,233,287	58,479,292

APPENDIX I

2009 PBT RELEASE AND TRANSFER DETAIL

PBT CHEMICAL / FACILITY	ON-SITE RELEASES				TRANSFERS	ON-SITE
	AIR	WATER	LAND	TOTAL	OFF SITE	WASTE MGMT.
BENZO(G,H,I)PERYLENE						
EDGE MOOR/HAY ROAD POWER PLANTS	0.03	0.01	0.00	0.04	0.00	0.00
INDIAN RIVER POWER PLANT	0.05	0.00	0.00	0.05	0.60	0.00
INVISTA	0.00	0.00	0.00	0.00	0.00	0.00
MOUNTAIRE FARMS OF DELMARVA	0.50	0.00	0.00	0.50	0.00	0.00
PERDUE BRIDGEVILLE	0.00	0.00	0.00	0.00	0.00	0.00
PERDUE GEORGETOWN	147.00	0.00	0.00	147.00	0.00	0.00
PINNACLE FOODS	0.00	0.00	0.00	0.00	0.00	0.00
PREMCOR REFINING GROUP	2.00	4.00	0.00	6.00	0.00	404.00
BENZO(G,H,I)PERYLENE Total	149.58	4.01	0.00	153.59	0.60	404.00
DIOXIN AND DIOXIN-LIKE COMPOUNDS						
DUPONT EDGE MOOR	0.00	0.01	0.00	0.01	2.14	0.00
EDGE MOOR/HAY ROAD POWER PLANTS	0.00	0.00	0.00	0.00	0.00	0.00
EVRAZ CLAYMONT STEEL	0.01	0.00	0.00	0.01	0.00	0.00
INDIAN RIVER POWER PLANT	0.00	0.00	0.00	0.00	0.00	0.00
INVISTA	0.00	0.00	0.00	0.00	0.00	0.00
PREMCOR REFINING GROUP	0.00	0.00	0.00	0.00	0.00	0.00
DIOXIN AND DIOXIN-LIKE COMPOUNDS Total	0.02	0.01	0.00	0.02	2.14	0.00
HEXACHLOROBENZENE						
DUPONT EDGE MOOR	0.10	0.10	0.00	0.20	52.20	0.00
HEXACHLOROBENZENE Total	0.10	0.10	0.00	0.20	52.20	0.00
LEAD						
DOVER AFB	84.00	0.00	0.00	84.00	0.00	0.00
MOTECH AMERICAS	0.00	0.00	0.00	0.00	137.10	0.00
V&S DELAWARE GALVANIZING, LLC	0.96	0.00	0.18	1.14	1,163.00	0.00
LEAD Total	84.96	0.00	0.18	85.14	1,300.10	0.00
LEAD COMPOUNDS						
CHROME DEPOSIT	0.00	0.00	0.00	0.00	7,350.00	0.00
DUPONT EDGE MOOR	0.08	56.70	0.00	56.78	36,594.70	0.00
EDGE MOOR/HAY ROAD POWER PLANTS	335.10	329.70	0.00	664.80	3,940.00	0.00
EVRAZ CLAYMONT STEEL	262.00	56.15	38.00	356.15	136,644.00	0.00
INDIAN RIVER POWER PLANT	107.15	0.00	17,251.00	17,358.15	0.20	0.00
INSTEEL WIRE	0.00	0.00	0.00	0.00	69.00	0.00
INVISTA	9.40	0.00	170.00	179.40	0.00	0.00
JOHNSON CONTROLS	168.00	10.00	0.00	178.00	3,354,757.28	0.00
NRG DOVER	1.80	0.00	0.00	1.80	96.11	0.00
PREMCOR REFINING GROUP	101.00	21.00	0.00	122.00	1,579.00	0.00
PRINCE MINERALS	0.38	0.00	0.00	0.38	0.00	0.00
VP RACING FUELS	0.30	0.00	0.00	0.30	9.00	0.00
LEAD COMPOUNDS Total	985.21	473.55	17,459.00	18,917.76	3,541,039.29	0.00

APPENDIX I

2009 PBT RELEASE AND TRANSFER DETAIL

PBT CHEMICAL / FACILITY	ON-SITE RELEASES				TRANSFERS OFF SITE	ON-SITE WASTE MGMT.
	AIR	WATER	LAND	TOTAL		
MERCURY						
DENTSPLY MAIN PLANT	0.02	0.00	0.00	0.02	2,492.00	0.00
OCCIDENTAL CHEMICAL	0.00	8.03	0.00	8.03	13,523.79	0.00
MERCURY Total	0.02	8.03	0.00	8.05	16,015.79	0.00
MERCURY COMPOUNDS						
EDGE MOOR/HAY ROAD POWER PLANTS	7.10	0.00	0.00	7.10	92.50	0.00
EVRAZ CLAYMONT STEEL	59.40	0.00	0.00	59.40	2.10	0.00
INDIAN RIVER POWER PLANT	70.00	0.00	57.00	127.00	0.00	0.00
INTERVET	0.00	0.00	0.00	0.00	2.59	0.00
INVISTA	13.00	0.00	0.00	13.00	0.00	0.00
NRG DOVER	7.10	0.00	0.00	7.10	1.50	0.00
PREMCOR REFINING GROUP	25.00	1.00	0.00	26.00	1.00	0.00
MERCURY COMPOUNDS Total	181.60	1.00	57.00	239.60	99.69	0.00
OCTACHLOROSTYRENE						
DUPONT EDGE MOOR	0.00	0.00	0.00	0.00	2.40	0.00
OCTACHLOROSTYRENE Total	0.00	0.00	0.00	0.00	2.40	0.00
PENTACHLOROBENZENE						
DUPONT EDGE MOOR	0.11	0.00	0.00	0.11	1.90	0.00
PENTACHLOROBENZENE Total	0.11	0.00	0.00	0.11	1.90	0.00
POLYCHLORINATED BIPHENYLS						
DUPONT EDGE MOOR	0.01	0.00	0.00	0.01	5.10	0.00
POLYCHLORINATED BIPHENYLS Total	0.01	0.00	0.00	0.01	5.10	0.00
POLYCYCLIC AROMATIC COMPOUNDS						
DUPONT EDGE MOOR	76.79	0.00	535.82	612.61	0.00	0.00
EDGE MOOR/HAY ROAD POWER PLANTS	35.60	0.04	0.00	35.64	0.00	0.00
IKO	0.00	0.00	0.00	0.00	82.71	2.66
INDIAN RIVER POWER PLANT	1.04	0.00	0.00	1.04	54.10	0.00
INVISTA	0.07	0.00	0.00	0.07	0.00	0.00
MOUNTAIRE FARMS FRANKFORD FEED MILL	1.48	0.00	0.00	1.48	0.00	0.00
MOUNTAIRE FARMS OF DELAWARE	2.24	0.00	0.00	2.24	0.00	0.00
MOUNTAIRE FARMS OF DELMARVA	22.60	0.00	0.00	22.60	0.00	0.00
PERDUE BRIDGEVILLE	0.00	0.00	0.00	0.00	0.00	0.00
PERDUE GEORGETOWN	0.00	0.00	0.00	0.00	0.00	0.00
PINNACLE FOODS	2.00	0.00	0.00	2.00	0.00	0.00
PREMCOR REFINING GROUP	25.00	5.00	0.00	30.00	853.00	332.00
POLYCYCLIC AROMATIC COMPOUNDS Total	166.82	5.04	535.82	707.68	989.81	334.66
STATE PBT TOTALS	1,568.43	491.74	18,052.00	20,112.16	3,559,509.02	738.66

APPENDIX J

2009 CARCINOGEN RELEASE AND TRANSFER DETAIL

CARCINOGEN / FACILITY	TOTAL ON-SITE RELEASES				TRANSFERS OFF SITE	ON-SITE WASTE MGMT.
	AIR	WATER	LAND	TOTAL		
1,3-BUTADIENE						
PREMCOR REFINING GROUP	534.00	0.00	0.00	534.00	0.00	1,225.00
1,3-BUTADIENE Total	534.00	0.00	0.00	534.00	0.00	1,225.00
4,4'-METHYLENEBIS(2-CHLOROANILINE)						
ROHM & HAAS B5 B6	0.00	0.00	0.00	0.00	0.00	0.00
ROHM & HAAS B7 B15	0.00	0.00	0.00	0.00	0.00	0.00
4,4'-METHYLENEBIS(2-CHLOROANILINE) Total	0.00	0.00	0.00	0.00	0.00	0.00
ARSENIC COMPOUNDS						
DUPONT EDGE MOOR	0.00	69.00	0.00	69.00	126.00	0.00
MOUNTAIRE FARMS FRANKFORD FEED MILL	0.00	0.00	0.00	0.00	0.00	0.00
MOUNTAIRE FARMS OF DELAWARE	0.00	0.00	0.00	0.00	0.00	0.00
ARSENIC COMPOUNDS Total	0.00	69.00	0.00	69.00	126.00	0.00
BENZENE						
PREMCOR REFINING GROUP	10,590.00	5.00	0.00	10,595.00	3,567.00	158,343.00
SUNOCO	3,280.00	0.00	0.00	3,280.00	0.00	0.00
VP RACING FUELS	0.00	0.00	0.00	0.00	0.00	0.00
BENZENE Total	13,870.00	5.00	0.00	13,875.00	3,567.00	158,343.00
CHROMIUM COMPOUNDS						
DUPONT EDGE MOOR	0.00	43.00	0.00	43.00	479,733.00	0.00
EVRAZ CLAYMONT STEEL	79.00	4.00	106.00	189.00	27,060.00	0.00
INDIAN RIVER POWER PLANT	129.14	250.00	26,546.00	26,925.14	0.03	0.00
ORIENT	0.00	0.00	0.00	0.00	0.00	0.00
CHROMIUM COMPOUNDS Total	208.14	297.00	26,652.00	27,157.14	506,793.03	0.00
COBALT COMPOUNDS						
DUPONT EDGE MOOR	0.00	33.00	0.00	33.00	5,690.00	0.00
COBALT COMPOUNDS Total	0.00	33.00	0.00	33.00	5,690.00	0.00
CREOSOTE						
DUPONT EDGE MOOR	935.00	0.00	6,579.00	7,514.00	0.00	0.00
CREOSOTE Total	935.00	0.00	6,579.00	7,514.00	0.00	0.00
DICHLOROMETHANE						
NORAMCO	485.00	0.00	0.00	485.00	41,279.00	119,534.00
DICHLOROMETHANE Total	485.00	0.00	0.00	485.00	41,279.00	119,534.00
ETHYL ACRYLATE						
BASF JOHNSON POLYMER	210.00	0.00	0.00	210.00	0.00	18.00
ETHYL ACRYLATE Total	210.00	0.00	0.00	210.00	0.00	18.00

APPENDIX J

2009 CARCINOGEN RELEASE AND TRANSFER DETAIL

CARCINOGEN / FACILITY	TOTAL ON-SITE RELEASES				TRANSFERS OFF SITE	ON-SITE WASTE MGMT.
	AIR	WATER	LAND	TOTAL		
ETHYLBENZENE						
ARLON	209.00	0.00	0.00	209.00	460.00	19,000.00
DOVER AFB	70.00	0.00	0.00	70.00	0.00	0.00
PREMCOR REFINING GROUP	2,031.00	5.00	0.00	2,036.00	30.00	14,952.00
ETHYLBENZENE Total	2,310.00	5.00	0.00	2,315.00	490.00	33,952.00
ETHYLENE OXIDE						
CRODA	1,495.00	0.00	0.00	1,495.00	0.00	0.00
SUNOCO	684.00	0.00	0.00	684.00	0.00	0.00
ETHYLENE OXIDE Total	2,179.00	0.00	0.00	2,179.00	0.00	0.00
HEXACHLOROENZENE						
DUPONT EDGE MOOR	0.10	0.10	0.00	0.20	52.20	0.00
HEXACHLOROENZENE Total	0.10	0.10	0.00	0.20	52.20	0.00
LEAD						
DOVER AFB	84.00	0.00	0.00	84.00	0.00	0.00
MOTECH AMERICAS	0.00	0.00	0.00	0.00	137.10	0.00
V&S DELAWARE GALVANIZING, LLC	0.96	0.00	0.18	1.14	1,163.00	0.00
LEAD Total	84.96	0.00	0.18	85.14	1,300.10	0.00
LEAD COMPOUNDS						
CHROME DEPOSIT	0.00	0.00	0.00	0.00	7,350.00	0.00
DUPONT EDGE MOOR	0.08	56.70	0.00	56.78	36,594.70	0.00
EDGE MOOR/HAY ROAD POWER PLANTS	335.10	329.70	0.00	664.80	3,940.00	0.00
EVRAZ CLAYMONT STEEL	262.00	56.15	38.00	356.15	136,644.00	0.00
INDIAN RIVER POWER PLANT	107.15	0.00	17,251.00	17,358.15	0.20	0.00
INSTEEL WIRE	0.00	0.00	0.00	0.00	69.00	0.00
INVISTA	9.40	0.00	170.00	179.40	0.00	0.00
JOHNSON CONTROLS	168.00	10.00	0.00	178.00	3,354,757.28	0.00
NRG DOVER	1.80	0.00	0.00	1.80	96.11	0.00
PREMCOR REFINING GROUP	101.00	21.00	0.00	122.00	1,579.00	0.00
PRINCE MINERALS	0.38	0.00	0.00	0.38	0.00	0.00
VP RACING FUELS	0.30	0.00	0.00	0.30	9.00	0.00
LEAD COMPOUNDS Total	985.21	473.55	17,459.00	18,917.76	3,541,039.29	0.00
NAPHTHALENE						
CARL KING	0.00	0.00	0.00	0.00	0.00	0.00
CRODA	9.20	0.00	0.00	9.20	0.00	0.00
DOVER AFB	111.00	0.00	0.00	111.00	0.00	0.00
INDIAN RIVER POWER PLANT	0.00	0.00	0.00	0.00	0.00	0.00
MOUNTAIRE FARMS OF DELAWARE	0.00	0.00	0.00	0.00	0.00	0.00
PREMCOR REFINING GROUP	2,965.00	5.00	0.00	2,970.00	0.00	6,324.00
NAPHTHALENE Total	3,085.20	5.00	0.00	3,090.20	0.00	6,324.00

APPENDIX J

2009 CARCINOGEN RELEASE AND TRANSFER DETAIL

CARCINOGEN / FACILITY	TOTAL ON-SITE RELEASES				TRANSFERS OFF SITE	ON-SITE WASTE MGMT.
	AIR	WATER	LAND	TOTAL		
NICKEL						
CAMDEL METALS	0.00	0.00	0.00	0.00	24,163.00	0.00
METAL MASTERS	0.50	0.00	0.00	0.50	47,627.00	0.00
NICKEL Total	0.50	0.00	0.00	0.50	71,790.00	0.00
NICKEL COMPOUNDS						
DUPONT EDGE MOOR	5.00	241.00	0.00	246.00	15,541.00	0.00
EVRAZ CLAYMONT STEEL	22.00	39.00	191.00	252.00	5,303.00	0.00
PREMCOR REFINING GROUP	580.00	1,403.00	0.00	1,983.00	27,881.00	0.00
PRINCE MINERALS	0.18	0.00	0.00	0.18	0.00	0.00
NICKEL COMPOUNDS Total	607.18	1,683.00	191.00	2,481.18	48,725.00	0.00
NITROBENZENE						
ORIENT	107.00	0.00	0.00	107.00	1.00	0.00
NITROBENZENE Total	107.00	0.00	0.00	107.00	1.00	0.00
P-CHLOROANILINE						
CIBA	7.00	0.00	0.00	7.00	3,810.00	457.00
P-CHLOROANILINE Total	7.00	0.00	0.00	7.00	3,810.00	457.00
POLYCHLORINATED BIPHENYLS						
DUPONT EDGE MOOR	0.01	0.00	0.00	0.01	5.10	0.00
POLYCHLORINATED BIPHENYLS Total	0.01	0.00	0.00	0.01	5.10	0.00
POLYCYCLIC AROMATIC COMPOUNDS						
DUPONT EDGE MOOR	76.79	0.00	535.82	612.61	0.00	0.00
EDGE MOOR/HAY ROAD POWER PLANTS	35.60	0.04	0.00	35.64	0.00	0.00
IKO	0.00	0.00	0.00	0.00	82.71	2.66
INDIAN RIVER POWER PLANT	1.04	0.00	0.00	1.04	54.10	0.00
INVISTA	0.07	0.00	0.00	0.07	0.00	0.00
MOUNTAIRE FARMS FRANKFORD FEED MILL	1.48	0.00	0.00	1.48	0.00	0.00
MOUNTAIRE FARMS OF DELAWARE	2.24	0.00	0.00	2.24	0.00	0.00
MOUNTAIRE FARMS OF DELMARVA	22.60	0.00	0.00	22.60	0.00	0.00
PERDUE BRIDGEVILLE	0.00	0.00	0.00	0.00	0.00	0.00
PERDUE GEORGETOWN	0.00	0.00	0.00	0.00	0.00	0.00
PINNACLE FOODS	2.00	0.00	0.00	2.00	0.00	0.00
PREMCOR REFINING GROUP	25.00	5.00	0.00	30.00	853.00	332.00
POLYCYCLIC AROMATIC COMPOUNDS Total	166.82	5.04	535.82	707.68	989.81	334.66
PROPYLENE OXIDE						
CRODA	467.41	0.00	0.00	467.41	0.00	0.00
PROPYLENE OXIDE Total	467.41	0.00	0.00	467.41	0.00	0.00

APPENDIX J

2009 CARCINOGEN RELEASE AND TRANSFER DETAIL

CARCINOGEN / FACILITY	TOTAL ON-SITE RELEASES			TOTAL	TRANSFERS	ON-SITE
	AIR	WATER	LAND		OFF SITE	WASTE MGMT.
STYRENE						
BASF JOHNSON POLYMER	353.00	0.00	0.00	353.00	0.00	1,142.00
JUSTIN TANKS	16,679.80	0.00	0.00	16,679.80	450.90	0.00
PREMCOR REFINING GROUP	18.00	5.00	0.00	23.00	0.00	77.00
STYRENE Total	17,050.80	5.00	0.00	17,055.80	450.90	1,219.00
TETRACHLOROETHYLENE						
PREMCOR REFINING GROUP	71.00	0.00	0.00	71.00	0.00	0.00
TETRACHLOROETHYLENE Total	71.00	0.00	0.00	71.00	0.00	0.00
TOLUENE DIISOCYANATE (MIXED ISOMERS)						
EAR	2.06	0.00	0.00	2.06	210.00	0.00
MACDERMID	6.00	0.00	0.00	6.00	0.00	643.00
ROHM & HAAS B5 B6	1.80	0.00	0.00	1.80	1,626.00	4,500.00
TOLUENE DIISOCYANATE (MIXED ISOMERS) Total	9.86	0.00	0.00	9.86	1,836.00	5,143.00
TRICHLOROETHYLENE						
CAMDEL METALS	2,375.00	0.00	0.00	2,375.00	7,340.00	0.00
TRICHLOROETHYLENE Total	2,375.00	0.00	0.00	2,375.00	7,340.00	0.00
VINYL ACETATE						
FORMOSA PLASTICS	31,943.00	0.00	0.00	31,943.00	0.00	0.00
VINYL ACETATE Total	31,943.00	0.00	0.00	31,943.00	0.00	0.00
VINYL CHLORIDE						
FORMOSA PLASTICS	43,800.00	5.30	0.00	43,805.30	0.00	219,400.00
VINYL CHLORIDE Total	43,800.00	5.30	0.00	43,805.30	0.00	219,400.00
STATE TOTAL	121,492	2,586	51,417	175,495	4,235,284	545,950

COMMON TOXIC CHEMICALS AND THEIR HAZARDS

Presented here are the top 15 TRI chemicals in descending order of the amount released to on-site to air, water, and/or land (see Figures 2-4 on pages 7-10). This information is presented as a quick reference summary of information for these toxic chemicals. This is not a detailed source of information on the sources, uses, or hazards of these chemicals. This information was obtained from the Hazardous Substance Fact Sheets provided by the New Jersey Department of Health and distributed by the EPA. The source for this information is listed in the For Further Information section on pages 54-55 of this report. The reader may also consult other chemical or toxicology reference materials to learn more about chemicals of interest. One such source is the Agency For Toxic Substances And Disease Registry. This source has a web site that has extensive information about many of the toxic chemicals in this report at: <http://www.atsdr.cdc.gov/toxprofiles/index.asp>. Excerpts for Nitrate Compounds came from EPA The National Nitrate Compliance Initiative, April 2002. Excerpts for metallic compounds came from EPA Risk Burn Guidance for Hazardous Waste Combustion Facilities.

AIR - From Figure 2 on page 7

Hydrochloric Acid (Hydrogen Chloride)

(Aerosol portion only is reportable)

Used in: Metal processing and cleaning, analytical chemistry, and making other chemicals. Also produced during coal and oil combustion at power generating facilities.

Hazard: Corrosive. Liquid phase can cause skin and eye burns, aerosol phase can irritate the mouth, nose and throat. People working in occupations in which hydrochloric acid gas is being used or manufactured have the highest risk of being exposed. Most families will not be exposed to significant levels of hydrochloric acid gas.

Carbonyl Sulfide

Used in: Chemical manufacturing, also a by-product of petroleum refining.

Hazard: Can irritate the eyes, nose, and throat and skin, toxic by inhalation and ingestion or skin absorption. High exposure may cause nausea, dizziness, confusion, and vomiting, increased or irregular heartbeat.

Sulfuric Acid

(Aerosol portion only is reportable)

Used in: Fertilizers, chemicals, dyes, petroleum refining, etching, analytical chemistry, metal manufacturing and plating, and explosives. Also produced during coal and oil combustion at power generating facilities.

Hazard: Corrosive. Liquid phase can cause skin and eye burns, aerosol phase can irritate the mouth, nose and throat. People working in occupations in which sulfuric acid gas is being used or manufactured have the highest risk of being exposed.

Hydrogen Fluoride

Used in: Etching glass, manufacturing chemicals and gasoline. Also produced during coal and oil combustion at power generating facilities.

Hazard: Corrosive. Liquid phase can cause skin and eye burns, aerosol phase can irritate the mouth, nose and throat. Exposures in the community, except possibly in cases of fires or spills, are usually much lower than those found in the workplace. Toxic by inhalation and ingestion or skin absorption.



APPENDIX K

COMMON TOXIC CHEMICALS AND THEIR HAZARDS

Ammonia

Used in: Refrigerant, in manufacturing fertilizer, plastics, dyes, and textiles. A product of human activity, including natural organic decomposition, run-off from fields and feedlots, waste treatment plant and refinery/chemical manufacturing effluents. Ammonia is applied directly into soil on farm fields, and is used to make fertilizers for farm crops, lawns, and plants. Many household and industrial cleaners contain ammonia.

Hazard: May irritate lungs, eyes, nose, throat, and mouth. Corrosive, can severely damage eyes and cause permanent damage. Not normally a liquid at room temperatures, workplace contact with liquid can freeze skin.

Propylene

Used in: Propylene is used in the production of many organic chemicals including resins, plastics, synthetic rubber and gasoline.

Hazard: Toxic by inhalation. Exposure to high levels can cause you to feel dizzy, lightheaded, and may cause unconsciousness. Boils at a low temperature (-47°C) and is a highly flammable gas. Contact with liquid may cause frostbite. Exposure may damage the liver, and affect the nervous system.

Vinyl Chloride

Used in: Plastics, adhesives and chemical manufacturing.

Hazard: Known carcinogen, mutagen. Toxic by inhalation and ingestion or skin absorption. May cause damage to developing fetus. May damage liver, kidneys, bones, blood vessels, and skin. Exposure may cause you to feel drowsy or lightheaded. Vinyl chloride is not normally found in urban, suburban, or rural air in amounts that are detectable by the usual methods of analysis. Vinyl chloride is also in tobacco smoke.

Vinyl Acetate

Used for: Plastics and chemical manufacturing.

Hazard: Inhalation can irritate the eyes, skin, nose, and throat. High levels of exposure can cause dizziness. May damage the lungs. Is a hazardous substance, is flammable and reactive. Is soluble in water and toxic to wildlife.

Toluene

Used in: As a solvent, in making gasoline, chemicals, perfumes, medicines, dyes, explosives, and detergents.

Hazard: Toxic by inhalation and skin exposure. Exposure can irritate the skin nasal membranes, and eyes, and can cause birth defects. May cause headache, dizziness, and in high concentrations, cause you to pass out. Chronic or prolonged exposure may cause liver, kidney, and brain damage. Toluene is a flammable liquid.

Styrene

Used in: Making polystyrene plastics, protective coatings, polyesters, resins, and as a chemical intermediate.

Hazard: Possible carcinogen, mutagen. Toxic by inhalation or skin absorption. Found in some foods, styrene can also be transferred in low levels to food from polystyrene packaging material. Can cause eye, nose, and throat irritation. Repeated exposure may cause concentration and memory problems. Higher levels may cause dizziness. Very high levels of exposure may be fatal or cause brain and liver damage. You can also be exposed to styrene in the air through tobacco smoke.

APPENDIX K

COMMON TOXIC CHEMICALS AND THEIR HAZARDS



Methanol

Used in: Solvents, cleaners, production of other chemicals.

Hazard: Toxic when inhaled, ingested, or by skin contact. Exposure may cause blindness, nausea, headaches, vomiting, and dizziness. Flammable and a fire hazard.

Ethylene

Used in: Polymer, plastic, solvent, resin, and antifreeze production in the petroleum and chemical industries.

Hazard: Exposure is primarily by inhalation in the workplace. Can cause headache, dizziness, and unconsciousness. Skin contact with liquid may cause frostbite. Is flammable, explosive, and reactive.

N-Hexane

Used in: Chief constituent of petroleum ether, gasoline, and rubber solvents. Also used in solvents for adhesives, in organic analysis, to extract vegetable oils from crops such as soybeans, and in denaturing alcohols.

Hazard: Toxic when inhaled, ingested, or by skin contact. Exposure can cause numbness, lightheadedness, giddiness, headaches, and nausea. The only people known to have been affected by exposure to n-hexane used it at work. Flammable liquid and a fire hazard.

Benzene

Used in: Making other chemicals which are used to make plastics, resins, and nylon and synthetic fibers. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Benzene is also a natural part of crude oil, gasoline, and cigarette smoke.

Hazard: Toxic when inhaled or by skin contact. Can cause dizziness, nose and throat irritation, and irregular heartbeat. Higher concentrations can cause convulsions and death. Is a carcinogen and is highly flammable.

Certain Glycol Ethers

Used in: Solvents, paint thinners.

Hazard: Can irritate the eyes, nose, throat, and skin. Toxic by inhalation and ingestion or skin absorption.

Repeated exposure may damage the liver and kidneys.

WATER – From Figure 3 on page 8 - Chemicals not reported in the Air section above

Nitrate & Nitrite Compounds (Sodium Nitrate, Sodium Nitrite)

Nitrates are toxic chemicals that can pose serious risks to human health and the environment. High levels of nitrates may cause significant environmental damage to streams, lakes, and rivers. Elevated levels of nitrates may damage surface water and ground water with excess nutrients and can cause algae blooms in coastal waters, which can remove oxygen from the water and result in fish kills. High levels can displace oxygen from the bloodstream and produce blue color in the skin and lips. The National Academy of Sciences recently reported that pollution by nitrogen and phosphorous were causing damage in most of the nation's coastal inlets, and severe problems were identified in 44 of the 139 coastal areas examined.



APPENDIX K

COMMON TOXIC CHEMICALS AND THEIR HAZARDS

Manganese and Manganese Compounds *

Used in: Dry-cell batteries, steelmaking, matches, fireworks, in animal feed, fertilizer, livestock nutritional supplements, in glazes and varnishes, and in ceramics, for water purification purposes in water and waste-treatment plants.

Hazard: Toxic when Inhaled. Repeated exposure can cause brain damage, may damage kidneys and liver.

Vanadium Compounds *

Used in: Steel alloys, other vanadium compounds, x-ray equipment, sulfuric acid, and synthetic rubber.

Hazard: Toxic when inhaled. Can irritate skin, nose, throat and lungs.

Barium and Barium Compounds *

Used in: Spark plugs and engine rod bearings, and to remove gas from vacuum tubes and television picture tubes.

Hazard: Toxic when inhaled, may irritate skin, eyes, nose and throat.

Nickel and Nickel Compounds *

Used in: Alloys and electroplating, catalysts, dyes, and textile printing.

Hazard: Carcinogenic. Toxic by inhalation. Eye and skin irritant. Repeated exposure may cause scarring of the lungs and may affect the kidneys.

Copper and Copper Compounds *

Used in: Electrical wiring, plumbing, fungicides, pesticides, electroplating, paint pigments and catalysts.

Hazard: Toxic when inhaled. Can irritate the eyes, nose and throat. May cause a skin allergy. Repeated high exposure to copper may affect the liver.

Hydrogen Cyanide and Cyanide Compounds

Used in: As insecticide for closed spaces, metal electroplating, and metal treatment.

Hazard: Extremely toxic by inhalation. Will depress the central nervous system. Will cause weakness and loss of coordination, headache, nausea, eye and skin irritation, and in higher concentrations will cause death in humans.

Zinc and Zinc Compounds *

Used in: Rustproof coating on iron and steel, making brass alloys, car parts, electroplating, batteries, electrical products, paints, and fungicides.

Hazard: Zinc oxide fumes (released during welding on galvanized metal) are toxic when inhaled. Zinc dust is a skin irritant.

Lead and Lead Compounds *

Used in: Batteries, ammunition, cable covering, ceramic glazes, metal alloys, and solders.

Hazard: Toxic by ingestion. Can cause brain damage, particularly in children. Listed as a possible carcinogen.

* These metallic compounds are usually by-products produced from impurities in the fuel associated with coal or oil combustion and/or ore processing

APPENDIX K

COMMON TOXIC CHEMICALS AND THEIR HAZARDS



Chromium Compounds *

Used in: Stainless and alloy steels, refractory products, tanning agents for leather, pigments, electroplating, catalysts, and corrosion-resistant products.

Hazard: Irritant and corrosive to human tissue, chromium compounds are carcinogens. Hexavalent compounds are more toxic than trivalent compounds.

Cresol (Mixed Isomers)

Used in: Making synthetic resins, photographic developers, disinfectants and fumigants.

Hazard: Toxic by inhalation or skin exposure. Corrosive, will cause skin and eye burns, possibly blindness. Soluble in water, toxic fish life. Is on the hazardous substances list.

Ethylene Glycol –

Used in: A component in anti-freeze in heating and cooling systems, to de-ice aircraft, as an industrial solvent, and in paint and plastics.

Hazard: Exposure may irritate nasal passages, cause nausea, vomiting, headache, or an intoxicated feeling. Prolonged exposure may affect the kidneys or brain.

2,4-Dimethylphenol

Used in: Disinfectants, solvents, pharmaceuticals, herbicides, and insecticides. Is present in petroleum and coal tar.

Hazard: Toxic by inhalation or skin exposure. Will irritate and burn the skin and eyes. Can irritate the nose, throat, and lungs causing coughing and shortness of breath. High exposure can cause headache, nausea, and fainting. Repeated exposure may affect the liver and kidneys. Is on the hazardous substances list.

LAND – From Figure 4 on page 10 - Chemicals not reported in the Air and/or Water sections above

Creosote Compounds

Used in: Wood preservation and water protection for products like railroad ties and utility poles, and for roofing products.

Hazard: By inhalation and skin contact. Listed as a probable carcinogen. Skin contact may cause irritation, burning, and itching, made worse by exposure to sunlight. Contact with eyes will cause severe eye irritation with possible loss of vision.

Polycyclic Aromatic Compounds (PACs)

Used in: Limited use, but a few of these compounds are used in manufacture of dyes, plastics, and pesticides.

Hazard: By inhalation and eating foods containing PACs. Inhalation hazard is from breathing air in areas where substances like coal, oil, and garbage are not burned completely, and in vicinity of agricultural burns and coal-tar and asphalt production facilities. Ingestion hazard is from eating foods such as charred meats, or drinking contaminated water or milk, which may contain PACs. Listed as a probable carcinogen.

* These metallic compounds are usually by-products produced from impurities in the fuel associated with coal or oil combustion and/or ore processing.



APPENDIX K

COMMON TOXIC CHEMICALS AND THEIR HAZARDS

Mercury and Mercury Compounds *

Used in: Thermometers, barometers, vapor lamps, mirror coatings, and in making chemicals and electrical equipment.

Hazard: The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury may permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Benzo(g,h,i)perylene

Used in: Research; can also be used in manufacture of dyes, plastics pesticides, explosives, and drugs.

Hazard: By inhalation, skin contact, and ingestion. Created when substances like coal, oil, and garbage are not burned completely. Can spread to kidneys, fat tissues, and the liver. Naturally eliminated by the body within a few days. Not known to cause cancer in humans.

Dioxin and Dioxin-like Compounds

Chlorinated Dibenzop-dioxins (CDDs) are a family of 75 different compounds commonly referred to as polychlorinated dioxins. These compounds have varying harmful effects, and are considered to be very toxic. Seventeen of the dioxin and dioxin-like compounds are reportable to TRI.

Used in: CDDs are not intentionally manufactured by industry, except in small amounts for research purposes. They are naturally produced from the incomplete combustion of organic material by forest fires or volcanic activity. They are unintentionally produced by industrial, municipal, and domestic incineration and combustion processes. CDDs formed during combustion processes are associated with small particles in the air, such as ash. The larger particles will be deposited close to the emission source, while very small particles may be transported longer distances. Some CDDs may vaporize and be transported long distances in the atmosphere, even around the globe. CDDs are found everywhere in the environment, and most people are exposed to very small background levels of CDDs when they breathe air or consume food. The most common way CDDs can enter your body is by eating food contaminated with CDDs. CDDs deposited on land from combustion sources or from herbicide or pesticide applications bind strongly to the soil, and therefore are not likely to contaminate groundwater by moving deeper into the soil.

Hazard: The most noted effect in people exposed to large amounts of one CCD, 2,3,7,8-TCCD, is chloracne, a severe skin disease. Other skin effects, including rashes and skin discoloration have also been noted. Changes in urine and blood that indicate liver damage may have occurred were also noted.

* These metallic compounds are usually by-products produced from impurities in the fuel associated with coal or oil combustion and/or ore processing.

GLOSSARY AND ACRONYMS

Aerosol - A gaseous form of a chemical, which includes mists, vapors, gases, and fogs, would be considered an aerosol. Hydrochloric and sulfuric acid aerosols are the reportable form of these two chemicals. These acids in aqueous solutions are no longer reportable under TRI, but an aerosol that is generated from a solution is reportable.

Air Releases - Point and non-point air emissions, or releases to air. Point releases are those chemicals released through **stacks**, vents, or other confined spaces and are usually regulated by permit. Non-point, or **fugitive**, releases include chemical leaks from valves, pump seals, etc., evaporative losses from surface impoundments (ponds) or spills, or releases from building ventilation systems.

ARP - DNREC's Accidental Release Program - Formerly known as the Industrial Disaster Prevention program, ARP provides protection for the lives and health of the citizens of Delaware by ensuring that companies with extremely hazardous substances have proper control plans and operations in place to prevent disasters.

Article - The term in 40 CFR Section 372.3, is defined as a manufactured item: (1) which is formed to a specific shape or design during manufacture; (2) which has end use functions dependent in whole or in part upon shape or design; and (3) which does not release an EPCRA section 313 chemical under normal conditions of processing or use of that item at the facility or establishment.

ATSDR - Agency for Toxic Substances and Disease Registry - A federal public health agency of the U.S. Department of Health and Human Services. ATSDR serves the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and diseases related to toxic substances.

Bioaccumulate - Bioaccumulate means to increase the concentration of a chemical in a biological organism such as humans over time, compared to the chemical's concentration in the environment. Compounds accumulate in living things any time they are taken up and stored faster than they are broken down or excreted.

Bottom Ash - Ash that falls to the bottom of the combustion chamber in a process burning fuels like coal and oil. Bottom ash is removed for disposal on a regular basis. Also see **Fly Ash**.

CAA - Clean Air Act - The Clean Air Act is the law that defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer. The last major change in the law was enacted by Congress in 1990. Legislation passed since then has made several minor changes.

Carcinogen - A carcinogen is a substance that can cause cancer of some form.

CEM - Continuous Emissions Monitoring - A continuous emission monitoring system (CEMS) is the total equipment necessary for the determination of a gas or particulate matter concentration or emission rate using continuous pollutant analyzer measurements. CEMS are required under some of the EPA regulations for either continual compliance determinations or determination of when standards have been exceeded.



APPENDIX L

Glossary and Acronyms

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA made several important changes and additions to the program, including provision for the TRI Program in the Emergency Planning and Community Right-to-Know Act. (See **EPCRA** and **SARA** below).

Chemical Abstracts Service (CAS) Registry Number - A numerical identification given to each unique chemical, which aids in the identification of a chemical with multiple synonyms (e.g., CAS 78-93-3 - methyl ethyl ketone, is also known as 2-butanone). Chemical categories under TRI do not possess a CAS numbers and are assigned category codes by the EPA. Lead compounds, for example, is category code N420.

Disposal - Any underground injection, placement in landfills/surface impoundments, land treatment, or other intentional land disposal.

DNREC - Delaware Department of Natural Resources and Environmental Control - The State agency in Delaware that is responsible for environmental concerns. It has seven divisions, and the Cabinet Secretary reports to the Governor. The Division of Waste and Hazardous Substances is responsible for this report, and the Divisions of Air Quality, Water, Community Services, Parks and Recreation, Fish and Wildlife, and Watershed Stewardship complete the Department.

Emission Factors - Emission factors are published industry emission rates of chemicals in particular processes, which are based on averaging a large sampling of representative processes.

Energy Recovery - The use of a waste product to create and utilize energy to generate steam, electricity, etc. A TRI chemical in waste must contain enough heating value to sustain the combustion process; otherwise it is considered only treatment or incineration of the waste.

Environmental Fate - The disposition, over time, of a chemical in the environment. The bioaccumulation of a chemical in fish and the decomposition of a chemical when exposed to sunlight are examples of environmental fate.

EPA - United States Environmental Protection Agency.

EPCRA - Emergency Planning and Community Right-to-Know Act. Congress enacted the Emergency Planning and Community Right to Know Act as Title III of the Superfund Amendments and Reauthorization Act (**SARA**) of 1986. This act includes the TRI program, and more information can be found in Appendix A of this report.

EPCRA Section 313 Chemical - A chemical or chemical category listed in 40 CFR Section 372.65 (40 CFR Section 372.3) - see **Toxic Chemical and Modified Chemicals** below.

Facility - All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with such person). A facility may contain more than one establishment, or distinct business unit.

APPENDIX L

Glossary and Acronyms



Fluid Bed - A fluid bed process uses a gas introduced under a bed of fine solid material to separate and fluidize the material, creating a condition of rapid mixing. The bed has the appearance of a vigorously boiling liquid, and the bed of material takes on many of the properties of a fluid. It exerts pressure and the material will flow through a hole in the vessel and over or under a weir within the bed. The fluid bed process is used to improve reaction time, heat transfer, processing uniformity, and process yield or conversions.

Fluid Catalytic Cracker - In petroleum chemistry, cracking is the process whereby complex organic molecules are converted to simpler molecules (light hydrocarbons) by the breaking of carbon-carbon bonds. Fluid Catalytic Cracking (FCC) produces a high yield of gasoline and LPG from heavier crude oil distillation fractions and residues. FCC uses a very active hot catalyst where it contacts the heavy feed material in a reactor, vaporizes it, and the cracking reactions break down the high molecular weight oil into lighter components including LPG, gasoline, and diesel fuel.

Fluid Coker - Used in refineries, fluid coking is a continuous fluid bed technology that thermally converts heavy hydrocarbons to lighter products.

Fly Ash - Ash that becomes airborne and escapes in the exhaust air from a combustion process that burns fuels like coal or oil. Fly ash can be controlled with air pollution control devices like precipitators and filters. Also see **Bottom Ash**.

FOIA - Freedom of Information Act – Originally signed into law on July 4, 1966 and amended in 1996, 2002 and 2007. This act allows for the full or partial disclosure of previously unreleased information and documents controlled by the United States Government. The Act defines agency records subject to disclosure, outlines disclosure procedures and grants some exemptions to the statute. Many states, including Delaware, have their own FOIA statutes.

Form A - A two-page report that a facility may use when certain criteria are met for a given chemical that must be reported. Refer to page 2 in this report for general reporting requirements, and pages 3-4 for details on eligibility and a description of the Form A data elements. The Form A provides basic facility information and the chemical identity, but does not provide other data that is given on the Form R. The Form A form is shown in Appendix N.

Form R- A five-page report that a facility must use (except when Form A eligibility applies) for reporting on each TRI chemical that the facility exceeds an applicable threshold. The Form R form is shown in Appendix M.

Fugitive Emissions - See **Air Releases**.

Hazardous Air Pollutants (HAPs) - Air pollutants which are not covered by ambient air quality standards but which, as defined in the Clean Air Act, may present a threat of adverse human health effects or adverse environmental effects. Such pollutants include asbestos, beryllium, mercury, benzene, coke oven emissions, radionuclides, and vinyl chloride.

IARC - International Agency for Research on Cancer (IARC) – IARC is part of the World Health Organization. IARC coordinates and conducts research on the causes of human cancer, the mechanisms of carcinogenesis, and develops scientific strategies for cancer control.



APPENDIX L

Glossary and Acronyms

Import - To cause a chemical to be imported into the customs territory of the United States. For purposes of the definition, "to cause" means to intend that the chemical be imported and to control the identity of the imported chemical and the amount of the imported chemical. For TRI reporting purposes, "import" is the same as "manufacture", as in either case the facility has caused the chemical to become present at the facility.

LEPC - Local Emergency Planning Committee (LEPC). Each LEPC has specific duties to fulfill, and the State Emergency Response Commission (SERC) supervises and coordinates those activities. The LEPC's are required to have broad representation from many groups including state and local officials, media, law enforcement, fire service, EMS and health care, environmental, community groups and citizens and industrial facilities that use hazardous materials. The SERC also receives various reports from businesses that use or store hazardous chemicals, or that experience an emergency release of a hazardous substance, and must establish procedures for receiving and processing requests for information from the public. See **SERC** for more information.

Manufacture - To produce, prepare, compound or import a TRI chemical, including the coincidental production of the chemical as an intermediate, a by-product, or an impurity.

Mass Balance Calculation - A method of calculating amounts and concentrations at a point in a process based on known amounts and concentrations at other points in the process. The basic Mass Balance equation is: $\text{Input} + \text{Generation} = \text{Output} + \text{Consumption}$.

MSDS - Material Safety Data Sheet - A Material Safety Data Sheet (MSDS) is prepared by the manufacturer of a product. The purpose of the form is to provide information on the safe use, handling and potential hazards of a product. The form is required to be developed under 29 CFR Section 1910.1200(g). This form lists important attributes, including toxicity and safety information that a user or handler of the chemical is required to know about.

NAAQS - National Ambient Air Quality Standards - The Clean Air Act required EPA to set National Ambient Air Quality Standards (40 CFR part 50) for pollutants considered harmful to public health and the environment. The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. They are: Carbon monoxide, lead, nitrogen dioxide, particulate matter (10 and 2.5 microns), ozone, and sulfur dioxide. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

NAICS - North American Industrial Classification System - This is a systematic classification system which assigns a six-digit number to each commercial and industrial facility. It expands the four-digit classification categories used by the **Standard Industrial Classification (SIC)** codes. It is used by government, industry, and sales organizations to reach targeted industries for data collection, enforcement, and sales. The TRI program converted to NAICS starting with the 2006 reporting year. The covered SIC codes were codes 10 (except 1011, 1081, and 1094), 12 (except 1241), or 20-39; industry codes 4911, 4931, or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce); or 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C, or 5169, or 5171, or 7389 (limited to facilities

primarily engaged in solvent recovery services on a contract or fee basis). The NAICS codes are not directly translatable from the SIC codes, so a reference document is usually required to translate or compare the codes. The intent in converting to the NAICS codes was to more precisely define the TRI reporting universe without adding to or subtracting from it. Also see

SIC – Standard Industrial Classification

NESHAP - National Emissions Standards for Hazardous Air Pollutants - The Clean Air Act (CAA) requires the U. S. Environmental Protection Agency (EPA) to develop and enforce regulations to protect the general public from exposure to hazardous air pollutants (HAPs).

NPDES - National Pollutant Discharge Elimination System - The Clean Water Act (CWA) requires that all discharges of pollutants to surface waters (streams, rivers, lakes, bays, and oceans) must be authorized by a permit issued under the National Pollutant Discharge Elimination System (NPDES) program.

Off-site Transfers - Waste that is transferred off-site to another facility for the purpose of treatment, recycling, energy recovery, or disposal.

On-site Releases - Emissions from a facility to the environment as a result of normal operations or accidents. This includes emissions to the air, discharges to surface waters, disposal onto or in the ground, and underground injection. Underground injection is not an approved method of hazardous waste disposal in Delaware.

On-site Waste Management - Wastes that are treated, recycled, or recovered for energy at the facility. The disposal of a waste into an on-site landfill is considered a release by EPA, and thus is not included in this category.

OSHA - Occupational Safety and Health Administration - The Federal agency that has the responsibility to ensure a safe and healthful work environment.

Otherwise Use - Encompasses any activity involving a TRI chemical that does not fall under the definition of manufacture or process. A chemical that is not intentionally incorporated into a product, like a solvent used for cleaning, falls under the otherwise use category.

P2 - Pollution Prevention - Pollution Prevention (P2) means "source reduction," as defined under the Pollution Prevention Act and other practices that reduce or eliminate the creation of pollutants. This EPA program was created to encourage, assist and lead others to prevent pollution at the source. Improved operation and maintenance, material substitution, process and equipment modification, conservation practices, product modification, and in-process recycling are examples of pollution prevention. EPA provides incentives to businesses, including public recognition, tools, and technical assistance. Since reduction of waste at its source is emphasized, recycling, energy recovery, treatment, and disposal are not included within the definition of pollution prevention. Also see **Waste Management** below.

PAC - Polycyclic Aromatic Compounds - PACs are multi-numbered benzene-ring compounds. PACs contain polycyclic aromatic hydrocarbons (PAHs), substituted PAHs, and PAH derivatives.



APPENDIX L

Glossary and Acronyms

PAH - Polynuclear Aromatic Hydrocarbon - Polynuclear aromatic hydrocarbons (PAHs) are hydrocarbon compounds with multiple benzene rings. PAHs are typical components of asphalts, fuels, oils, and greases. They are also called Polycyclic Aromatic Hydrocarbons. They are of concern because some of these compounds have been identified as carcinogens.

PCB - Polychlorinated Biphenyls - A group of toxic, persistent chemicals used in electrical transformers and capacitors for insulating purposes, and in gas pipeline systems as lubricants. The sale and new use of these chemicals were banned by law in 1979.

PBT - Persistent Bioaccumulative Toxin - PBT pollutants are chemicals that are toxic, persist in the environment and bioaccumulate (are not broken down or excreted), and thus pose risks to human health and ecosystems. The biggest concerns about PBT's are that they transfer rather easily among air, water, and land, and span boundaries of geography and generations.

PEL - Permissible Exposure Limit - OSHA sets permissible exposure limits (PELs) to protect workers against the health effects of exposure to hazardous substances. PELs are regulatory limits on the amount or concentration of a substance in the air. PELs are enforceable. OSHA PELs are based on an 8-hour time weighted average (TWA) exposure.

pH - pH is a measure of the acidity in a liquid. High acid content will be indicated by a pH of less than 7.0, and low acidity, called alkalinity, is indicated by a pH higher than 7.0. Although the pH scale is 0-14, it is a logarithmic scale and the range is based on powers of 10. In the case of pH, the range is 1×10^{-7} to 1×10^7 (0.0000001 to 10,000,000).

PM - Particulate Matter - Tiny particles of solid or liquid suspended in a gas or liquid. Sources of particulate matter can be man-made or natural. Some particulates occur naturally, originating from volcanoes, dust storms, forest and grassland fires, living vegetation, and sea spray. Human activities, such as the burning of fossil fuels in vehicles, power plants and various industrial processes also generate significant amounts of particulates. Increased levels of fine particles in the air are linked to health hazards such as heart disease, altered lung function and lung cancer. The notation PM_{10} is used to describe particles of 10 micrometers or less and $PM_{2.5}$ represents particles less than 2.5 micrometers in diameter. One micrometer is one millionth of a meter, or about 0.00004 inches.

POTW - Publicly Owned Treatment Works - Usually a municipal wastewater treatment facility.

PPA - Pollution Prevention Act of 1990 - Pollution prevention became a national policy with the Pollution Prevention Act of 1990. The Act established the waste management hierarchy whereby wastes should be prevented or reduced at the source whenever feasible, and safe disposal is the option of last resort.

Process - To prepare a TRI chemical, after its manufacture, for distribution into commerce. Processing includes intentionally incorporating the chemical into a product or the reaction of the chemical to form another chemical or product.

RCRA - Resource Conservation and Recovery Act - The Resource Conservation and Recovery Act - commonly referred to as RCRA - is our nation's primary law governing the disposal of solid and hazardous waste. Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and

industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner.

Recycle - The process of capturing a useful product from a waste stream. Solvent recovery, metals recovery, and acid regeneration are examples of recycling.

Regulation 1146 - This regulation establishes Nitrogen Oxides (NO_x), Sulfur Dioxide (SO₂), and mercury emissions limits to achieve reductions of those pollutants from Delaware's large electric generation units. The reduction in NO_x, SO₂, and mercury emissions will: 1) reduce the impact of those emissions on public health; 2) aid in Delaware's attainment of the State and National Ambient Air Quality Standard (NAAQS) for ground level ozone and fine particulate matter; 3) help address local scale fine particulate and mercury problems attributable to coal and residual oil-fired electric generating units, 4) satisfy Delaware's obligations under the Clean Air Mercury Rule (CAMR), and 5) improve visibility and help satisfy Delaware's EGU-related regional haze obligations.

Release - Any spilling, leaking, pumping, pouring, emitting, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles of any EPCRA Section 313 chemicals.

SARA - Superfund Amendments and Reauthorization Act of 1986 (SARA Title III), also known as The Emergency Planning and Community Right-to-Know Act (EPCRA), was enacted in 1986. This law provides an infrastructure at the state and local levels to plan for chemical emergencies. Facilities that store, use, or release certain chemicals, may be subject to various reporting requirements. Reported information is then made publicly available through the **Toxics Release Inventory** and other programs so that interested parties may become informed about potentially dangerous chemicals in their community.

Selective Catalytic Reduction (SCR) - Nitrogen oxides (NO_x) emissions in boiler exhaust gas are converted into elemental nitrogen and water by injecting a nitrogen-based chemical reagent, most commonly ammonia, into the gas and then passing the gas through a catalyst bed where the NO_x and ammonia react to form nitrogen and water vapor. Also see **SNCR** below.

Selective Non-Catalytic Reduction (SNCR) - Nitrogen oxides (NO_x) emissions in boiler exhaust gas are converted into elemental nitrogen and water by injecting a nitrogen-based chemical reagent, most commonly urea or ammonia into the gas in the furnace. The SNCR method does not require a catalyst, but has lower conversion efficiency than the SCR method. Also see **SCR** above.

SERC - State Emergency Response Commission - The SERC's were created in response to the federal Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, and are comprised of representatives from various state and local government organizations and industry. The primary focus of a SERC is to enhance state and local emergency response and preparedness capabilities through better coordination and planning. See **LEPC (Local Emergency Planning committee)** for more information.



APPENDIX L

Glossary and Acronyms

Standard Industrial Classification (SIC) Code - A four-digit code established by the Federal Office of Management and Budget used to describe the type of activity(s) at a facility. Facilities that engage in a variety of activities may possess multiple codes. Also see **North American Industrial Classification System (NAICS)**. The TRI program converted to NAICS starting with the 2006 reporting year.

Stack Test - A process of sampling an exhaust stack to determine the contents, usually in percent concentration and cubic feet per hour. Sampling is usually done through a port or series of ports at an elevated point on the stack.

TSCA - Toxic Substance Control Act – TSCA was enacted to provide information about all chemicals and to control the production of new chemicals that might present an unreasonable risk of injury to health or the environment. TSCA authorizes the Environmental Protection Agency to require testing of chemical substances. TSCA also provides authority to regulate the manufacturing, processing, import and use of chemicals. The manufacture use, and/or disposal of chemicals are covered in virtually every environmental law and in OSHA and DOT regulations, and TSCA fills the gaps in other laws and supplements sections of existing laws. EPA maintains and publishes the TSCA Inventory, which includes a list of chemicals manufactured, imported, or processed for commercial purposes in the United States. The TSCA Inventory is voluminous, with more than 75,000 chemical substances.

Toxic Chemical - A chemical or chemical category listed in 40 CFR Section 372.65 (40 CFR Section 372.3); causing acute human health risks, cancer or chronic (non-cancer) human health effects, and/or environmental effects.

Treatment - The removal, destruction, alteration, or stabilization of the waste. Biological treatment, incineration, and neutralization are examples of waste treatment. Wastewater treatment plants and hazardous waste incinerators are examples of treatment facilities.

TRI - The Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

TSDF - Treatment, Storage, and Disposal Facility - A site where a hazardous substance is treated, stored or disposed of. TSDF facilities are regulated by EPA and states under the **Resource Conservation and Recovery Act (RCRA)**.

VOC - Volatile Organic Compounds - Chemical compounds containing carbon and hydrogen which readily evaporate at room temperature.

Waste Management - EPA interprets waste management to include the following activities: recycling, combustion for energy recovery, treatment for destruction, waste stabilization, and release, including disposal. Waste management does not include the storage, container transfer, or tank transfer if no recycling, combustion for energy, treatment for destruction, waste stabilization, or release of the chemical occurs at the facility.

More terms and acronyms can be found at: <http://www.epa.gov/OCEPAt/terms/intro.htm> .

APPENDIX M

TRI REPORTING FORMS - FORM R



TOXICS RELEASE INVENTORY

Sample Form R
For Reporting year 2009

Form Approved OMB Number: 2025-0009
Approval Expires: 03/31/2011

(IMPORTANT: Type or print; read instructions before co

Page 1 of 5

FORM R		TRI Facility ID Number
EPA United States Environmental Protection Agency		Toxic Chemical, Category or Generic Name
Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986, also Known as Title III of the Superfund Amendments and Reauthorization Act		
WHERE TO SEND COMPLETED FORMS: 1. TRI Data Processing Center P. O. Box 10163 Fairfax, VA 22038		
2. APPROPRIATE STATE OFFICE (See instructions in Appendix E)		
This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank.	Revision (enter up to two code(s)) <input type="text"/> <input type="text"/>	Withdrawal (enter up to two code(s)) <input type="text"/> <input type="text"/>
IMPORTANT: See instructions to determine when "Not Applicable (NA)" boxes should be checked.		
PART 1. FACILITY IDENTIFICATION INFORMATION		
SECTION 1. REPORTING YEAR _____		
SECTION 2. TRADE SECRET INFORMATION		
2.1	Are you claiming the toxic chemical identified on page 2 trade secret? <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms)	2.2 Is this copy <input type="checkbox"/> Sanitized <input type="checkbox"/> Unsanitized (Answer only if "YES" in 2.1)
<input type="checkbox"/> No (Do not answer 2.2; Go to Section 3)		
SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.) I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.		
Name and official title of owner/operator or senior management official:		Signature:
		Date Signed:
SECTION 4. FACILITY IDENTIFICATION		
4.1	TRI Facility ID Number	
Facility or Establishment Name		Facility or Establishment Name or Mailing Address (If different from street address)
Street		Mailing Address
City/County/State/Zip Code		Country (Non-US)
City/State/Zip Code		
4.2	This report contains information for: (Important: Check a or b; check c or d if applicable)	
a. <input type="checkbox"/> An entire facility		b. <input type="checkbox"/> Part of a facility
c. <input type="checkbox"/> A Federal facility		d. <input type="checkbox"/> GOCO
4.3	Technical Contact Name	Telephone Number (include area code)
	Email Address	
4.4	Public Contact Name	Telephone Number (include area code)
	Email Address	
4.5	NAICS Code (s) (6 digits)	
Primary		
a.		b.
c.		d.
e.		f.
4.6	Dun & Bradstreet Number (s) (9 digits)	
a.		
b.		
SECTION 5. PARENT COMPANY INFORMATION		
5.1	Name of Parent Company	NA <input type="checkbox"/>
5.2	Parent Company's Dun & Bradstreet Number	NA <input type="checkbox"/>

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APPENDIX M

TRI REPORTING FORMS - FORM R

TOXICS RELEASE INVENTORY

Form Approved OMB Number: 2025-0009

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(IMPORTANT: Type or print; read instructions before completing form)

<h3>FORM R</h3> <p>PART II. TOXIC CHEMICAL RELEASE INV</p>	<p>Sample Form R For Reporting year 2008</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">TRI Facility ID Number</td> <td style="height: 20px;"></td> </tr> <tr> <td style="font-size: small;">Toxic Chemical, Category or Generic Name</td> <td style="height: 20px;"></td> </tr> </table>	TRI Facility ID Number		Toxic Chemical, Category or Generic Name	
TRI Facility ID Number						
Toxic Chemical, Category or Generic Name						

SECTION 1. TOXIC CHEMICAL IDENTITY (Important: DO NOT complete this section if you completed Section 2 below.)

1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)	
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)	
1.3	Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)	

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces and punctuation.)	
-----	---	--

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY

(Important: Check all that apply.)

<p>3.1 Manufacture the toxic chemical:</p> <p>a. <input type="checkbox"/> Produce b. <input type="checkbox"/> Import</p> <p style="font-size: x-small;">If produce or import</p> <p>c. <input type="checkbox"/> For on-site use/processing</p> <p>d. <input type="checkbox"/> For sale/distribution</p> <p>e. <input type="checkbox"/> As a byproduct</p> <p>f. <input type="checkbox"/> As an impurity</p>	<p>3.2 Process the toxic chemical:</p> <p>a. <input type="checkbox"/> As a reactant</p> <p>b. <input type="checkbox"/> As a formulation component</p> <p>c. <input type="checkbox"/> As an article component</p> <p>d. <input type="checkbox"/> Repackaging</p> <p>e. <input type="checkbox"/> As an impurity</p>	<p>3.3 Otherwise use the toxic chemical:</p> <p>a. <input type="checkbox"/> As a chemical processing aid</p> <p>b. <input type="checkbox"/> As a manufacturing aid</p> <p>c. <input type="checkbox"/> Ancillary or other use</p>
---	--	---

SECTION 4. MAXIMUM AMOUNT OF THE TOXIC CHEMICAL ON SITE AT ANY TIME DURING THE CALENDAR YEAR

4.1	(Enter two digit code from instruction package.)	[]
-----	--	-----

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE

			A. Total Release (pounds/year*) (Enter a range code** or estimate)	B. Basis of Estimate (enter code)	C. % From Stormwater
5.1	Fugitive or non-point air emissions	NA <input type="checkbox"/>			
5.2	Stack or point air emissions	NA <input type="checkbox"/>			
5.3	Discharges to receiving streams or water bodies (enter one name per box)				
Stream or Water Body Name					
5.3.1					
5.3.2					
5.3.3					

If additional pages of Part II, Section 5.3 are attached, indicate the total number of pages in this box [] and indicate the Part II, Section 5.3 page number in this box. [] (example: 1,2,3, etc.)

EPA Form 9350 -1 (Rev. 10/2009) - Previous editions are obsolete.

*For Dioxin or Dioxin-like compounds, report in grams/year.
** Range Codes: A= 1-10 pounds; B= 11-499 pounds; C= 500-999 pounds.

APPENDIX M

TRI REPORTING FORMS - FORM R



TOXICS RELEASE INVENTORY

Form Approved OMB Number: 2025-0009

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(IMPORTANT: Type or print; read instructions before completing form)

Sample Form R For Reporting year 2009	FORM R PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED)	TRI Facility ID Number
		Toxic Chemical, Category or Generic Name

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ON SITE (continued)

		NA	A. Total Release (pounds/year*) (enter range code ** or estimate)	B. Basis of Estimate (enter code)
5.4.1	Underground Injection onsite to Class I Wells	<input type="checkbox"/>		
5.4.2	Underground Injection onsite to Class II-V Wells	<input type="checkbox"/>		
5.5	Disposal to land onsite	<input type="checkbox"/>		
5.5.1A	RCRA Subtitle C landfills	<input type="checkbox"/>		
5.5.1B	Other landfills	<input type="checkbox"/>		
5.5.2	Land treatment/application farming	<input type="checkbox"/>		
5.5.3A	RCRA Subtitle C surface impoundments	<input type="checkbox"/>		
5.5.3B	Other surface impoundments	<input type="checkbox"/>		
5.5.4	Other disposal	<input type="checkbox"/>		

SECTION 6. TRANSFERS OF THE TOXIC CHEMICAL IN WASTES TO OFF-SITE LOCATIONS

6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs)

6.1.A Total Quantity Transferred to POTWs and Basis of Estimate

6.1.A.1 Total Transfers (pounds/year*) (enter range code ** or estimate)	6.1.A.2 Basis of Estimate (enter code)

6.1.B POTW Name

POTW Address

City <input style="width: 60%;" type="text"/>	State <input style="width: 20%;" type="text"/>	County <input style="width: 60%;" type="text"/>	Zip <input style="width: 20%;" type="text"/>
---	--	---	--

6.1.B POTW Name

POTW Address

City <input style="width: 60%;" type="text"/>	State <input style="width: 20%;" type="text"/>	County <input style="width: 60%;" type="text"/>	Zip <input style="width: 20%;" type="text"/>
---	--	---	--

If additional pages of Part II, Section 6.1 are attached, indicate the total number of pages in this box and indicate the Part II, Section 6.1 page number in this box (example: 1,2,3, etc.)

SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS

6.2. Off-Site EPA Identification Number (RCRA ID No.)

Off-Site Location Name

Off-Site Address

City <input style="width: 60%;" type="text"/>	State <input style="width: 20%;" type="text"/>	County <input style="width: 60%;" type="text"/>	Zip <input style="width: 20%;" type="text"/>	Country (Non-US) <input style="width: 40%;" type="text"/>
---	--	---	--	---

Is location under control of reporting facility or parent company? Yes No

EPA Form 9350 -1 (Rev. 10/2009) - Previous editions are obsolete.

* For Dioxin or Dioxin-like compounds, report in grams/year
** Range Codes: A=1-10 pounds; B=1-499 pounds; C=500 - 999 pounds.



APPENDIX M

TRI REPORTING FORMS - FORM R

TOXICS RELEASE INVENTORY

Form Approved OMB Number: 2025-0009
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(IMPORTANT: Type or print; read instructions before completing form)

FORM R					TRI Facility ID Number	
PART II. CHEMICAL-SPECIFIC INFORMATION (CONTINUED)					Toxic Chemical, Category or Generic Name	
SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS (CONTINUED)						
A. Total Transfers (pounds/year*) (enter range code** or estimate)		B. Basis of Estimate (enter code)		C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code)		
1.		1.		1. M		
2.		2.		2. M		
3.		3.		Sample Form R For Reporting year 2009		
4.		4.				
6.2 _____ Off-Site EPA Identification Number (RCRA ID No.)						
Off-Site Location Name						
Off-Site Address						
City	State	County	Zip	Country (Non-US)		
Is location under control of reporting facility or parent company? Yes <input type="checkbox"/> No <input type="checkbox"/>						
A. Total Transfers (pounds/year*) (enter range code** or estimate)		B. Basis of Estimate (enter code)		C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code)		
1.		1.		1. M		
2.		2.		2. M		
3.		3.		3. M		
4.		4.		4. M		
SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY						
<input type="checkbox"/> Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.						
a. General Waste Stream [enter code]	b. Waste Treatment Method(s) Sequence [enter 3- or 4- character code(s)]				d. Waste Treatment Efficiency [enter 2 character code]	
7A.1a	7A.1b	1	2	7A.1d		
	3	4	5			
	6	7	8			
7A.2a	7A.2b	1	2	7A.2d		
	3	4	5			
	6	7	8			
7A.3a	7A.3b	1	2	7A.3d		
	3	4	5			
	6	7	8			
7A.4a	7A.4b	1	2	7A.4d		
	3	4	5			
	6	7	8			
7A.5a	7A.5b	1	2	7A.5d		
	3	4	5			
	6	7	8			
If additional pages of Part II, Section 6.2/7A are attached, indicate the total number of pages in this box <input type="checkbox"/> and indicate the Part II, Section 6.2/7 page number in this box: <input type="checkbox"/> (example: 1,2,3,etc.)						

EPA Form 9350 -1 (Rev. 10/2009) - Previous editions are obsolete.

*For Dioxin or Dioxin-like compounds, report in grams/year

**Range Codes: A=1 - 10 pounds; B=11 - 499 pounds C= 500-999 pounds.

APPENDIX M

TRI REPORTING FORMS – FORM R



TOXICS RELEASE INVENTORY

(IMPORTANT: Type or print; read instructions before completing form)

Form Approved OMB Number: 2025-0009
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FORM R					
PART II. CHEMICAL-SPECIFIC INFORMATION (CONTINUED)		TRI Facility ID Number			
		Toxic Chemical, Category or Generic Name			
SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES					
<input type="checkbox"/> Not Applicable (NA) - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.					
Energy Recovery Methods [enter 3-character code(s)]					
1	2	3			
SECTION 7C. ON-SITE RECYCLING PROCESSES					
<input type="checkbox"/> Not Applicable (NA) - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.					
Recycling Methods [enter 3-character code(s)]					
1	2	3			
SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES					
		Column A Prior Year (pounds/year*)	Column B Current Reporting Year (pounds/year*)	Column C Following Year (pounds/year*)	Column D Second Following Year (pounds/year*)
8.1					
8.1a	Total on-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills				
8.1b	Total other on-site disposal or other releases				
8.1c	Total off-site disposal to Class I Underground Injection Wells, RCRA Subtitle C landfills, and other landfills				
8.1d	Total other off-site disposal or other releases				
8.2	Quantity used for energy recovery onsite				
8.3	Quantity used for energy recovery offsite				
8.4	Quantity recycled onsite				
8.5	Quantity recycled offsite				
8.6	Quantity treated onsite				
8.7	Quantity treated offsite				
8.8	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year)*				
8.9	Production ratio or activity index				
8.10	Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11.				
	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)			
8.10.1	a.	b.	c.		
8.10.2	a.	b.	c.		
8.10.3	a.	b.	c.		
8.10.4	a.	b.	c.		
8.11	If you wish to submit additional optional information on source reduction, recycling, or pollution control activities, check "Yes."				Yes <input type="checkbox"/>

Sample Form R
For Reporting year 2009

EPA Form 9350 -1 (Rev. 10/2009) - Previous editions are obsolete.

*For Dioxin or Dioxin-like compounds, report in grams/year.



APPENDIX N

TRI REPORTING FORMS - FORM A

TOXICS RELEASE INVENTORY

Form Approved OMB Number: 2025-0010

Approval Expires: 03/31/2011

Page 1 of 1

(IMPORTANT: Type or print; read instructions before completing form)

EPA United States Environmental Protection Agency		TOXICS RELEASE INVENTORY FORM A		Sample Form A Page 1 For Reporting year 2009	
WHERE TO SEND COMPLETED FORMS: 1. TRI Data Processing Center P. O. Box 10163 Fairfax, VA 22038 ATTN: TOXIC CHEMICAL RELEASE INVENTORY			2. APPROPRIATE STATE OFFICE (See instruction in Appendix E)		TRI Facility ID Number
This section only applies if you are revising or withdrawing a previously submitted form, otherwise leave blank.		Revision (enter up to two code(s)) <input type="text"/> <input type="text"/>		Withdrawal (enter up to two code(s)) <input type="text"/> <input type="text"/>	
IMPORTANT: See instructions to determine when "Not Applicable (NA)" boxes should be checked.					
PART 1. FACILITY IDENTIFICATION INFORMATION					
SECTION 1. REPORTING YEAR _____					
SECTION 2. TRADE SECRET INFORMATION					
2.1 Are you claiming the toxic chemical identified on page 2 trade secret? <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms)		<input type="checkbox"/> No (Do not answer 2.2; Go to Section 3)		2.2 Is this copy <input type="checkbox"/> Sanitized <input type="checkbox"/> Unsanitized (Answer only if "YES" in 2.1)	
SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)					
I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and that the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.					
Name and official title of owner/operator or senior management official:			Signature:		Date Signed:
SECTION 4. FACILITY IDENTIFICATION					
4.1		TRI Facility ID Number		<input type="text"/>	
Facility or Establishment Name		Facility or Establishment Name or Mailing Address (If different from street address)			
Street		Mailing Address			
City/County/State/Zip Code		City/State/Zip Code		Country (Non-US)	
4.2 This report contains information for: (Important: Check c or d if applicable)					
c. <input type="checkbox"/> A Federal facility d. <input type="checkbox"/> GOCO					
4.3 Technical Contact Name		Telephone Number (include area code)			
Email Address		<input type="text"/>			
4.4 Public Contact Name		Telephone Number (include area code)			
Email Address		<input type="text"/>			
4.5 NAICS Code (s) (6 digits)		Primary	a.	b.	c.
			d.	e.	f.
4.7 Dun & Bradstreet Number (s) (9 digits)		a.			
		b.			
SECTION 5. PARENT COMPANY INFORMATION					
5.1 Name of Parent Company		NA <input type="checkbox"/>			
5.2 Parent Company's Dun & Bradstreet Number		NA <input type="checkbox"/>			

APPENDIX N

TRI REPORTING FORMS - FORM R



TOXICS RELEASE INVENTORY

Page ___ of ___

(IMPORTANT: Type or print; read instructions before completing form)

EPA FORM A		TRIFID: _____
PART II. CHEMICAL IDENTIFICATION		
Do not use this form for reporting PBT chemicals including Dioxin and Dioxin-like Compounds*		
SECTION 1. TOXIC CHEMICAL IDENTITY		Report ___ of ___
1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)	
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)	
1.3	Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)	
SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above)		
2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.)	
SECTION 1. TOXIC CHEMICAL IDENTITY		Report ___ of ___
1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)	
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)	
1.3	Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)	
SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above)		
2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.)	
SECTION 1. TOXIC CHEMICAL IDENTITY		Report ___ of ___
1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)	
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)	
1.3	Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)	
SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above)		
2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.)	
SECTION 1. TOXIC CHEMICAL IDENTITY		Report ___ of ___
1.1	CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)	
1.2	Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)	
1.3	Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)	
SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above)		
2.1	Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.)	

Sample Form A Page 2
For Reporting year 2009

*See the TRI Reporting Forms and Instructions Manual for the list of PBT Chemicals (including Dioxin and Dioxin-like Compounds)

EPA Form 9350 -2 (Rev. 10/2009) - Previous editions are obsolete.

(Make additional copies of this page, if needed)



APPENDIX O

TRI REPORTING FORMS

DIOXIN SCHEDULE 1

Form Approved OMB Number: 2025-0007
Approval Expires 04/30/2010

TRI Facility ID Number

FORM R Schedule 1



PART II. CHEMICAL-SPECIFIC IN FORMATION (continued)

SECTION 5. QUANTITY OF DIOXIN AND DIOXIN-LIKE COMPOUNDS ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE

5.1	NA	5.2	NA	5.3	5.3.3	
					5.3.1	5.3.2
Fugitive or non-point air emissions		Stack or point air emissions		Discharges to receiving streams or water bodies (enter data for one stream or water body per box)		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Supplemental Schedule 1
For Dioxin Reporting
Page 1
For Reporting Year 2009

If additional pages of Section 5.3 are attached, indicate the total number of pages in this box
and indicate the Section 5.3 page number in this box (example: 1,2,3, etc.)

APPENDIX O TRI REPORTING FORMS DIOXIN SCHEDULE 1



Page 2 of 4

Form Approved OMB Number: 2025-0007
Approval Expires 04/30/2010

(IMPORTANT: Type or print; read instructions before completing form)

TRI Facility ID Number

FORM R Schedule 1

PART II. CHEMICAL-SPECIFIC IN FORMATION (continued)

SECTION 5. QUANTITY OF DIOXIN AND DIOXIN-LIKE COMPOUNDS ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE

Underground Injection		5.5 Disposal to land onsite														
5.4.1	NA	5.4.2	NA	5.5.1-A	NA	5.5.1-B	NA	5.5.2	NA	5.5.3A	NA	5.5.3B	NA	5.5.4	NA	
Underground Injection onsite to Class I Wells		Underground Injection onsite to Class II-V Wells		RCRA Subtitle C landfills		Other landfills		Land treatment/ application farming		RCRA Subtitle C surface impoundments		Other surface impoundments		Other disposal		
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																

Supplemental Schedule 1
For Dioxin Reporting
Page 2
For Reporting Year 2009

C. Mass (grams) of Each Compound in the category (1-17)



APPENDIX O

TRI REPORTING FORMS

DIOXIN SCHEDULE 1

Form Approved OMB Number: 2025-0007
Approval Expires: 04/30/2010

Page 3 of 4

TRI Facility ID Number

FORM R Schedule 1

PART II. CHEMICAL-SPECIFIC INFORMATION (continued)

SECTION 6. TRANSFERS OF DIOXIN AND DIOXIN-LIKE COMPOUNDS IN WASTES TO OFF-SITE LOCATIONS

6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs)

		6.1.A.3 Mass (grams) of Each Compound in the Category (1-17)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1																		
10																		

6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS

		D. Mass (grams) of Each Compound in the Category (1-17)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.																		
9																		
2.																		
9																		
3.																		
9																		
4.																		
9																		

		D. Mass (grams) of Each Compound in the Category (1-17)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.																		
9																		
2.																		
9																		
3.																		
9																		
4.																		
9																		

If additional pages of Section 5.3 are attached, indicate the total number of pages in this box and indicate the Section 5.3 page number in this box (example: 1,2,3, etc.)

Supplemental Schedule 1
For Dioxin Reporting
Page 3
For Reporting Year 2009

APPENDIX O TRI REPORTING FORMS DIOXIN SCHEDULE 1



Form Approved OMB Number: 2025-0007
Approval Expires: 04/30/2010

Page 4 of 4

TRI Facility ID Number

FORM R Schedule 1 PART II. CHEMICAL-SPECIFIC INFORMATION (continued)

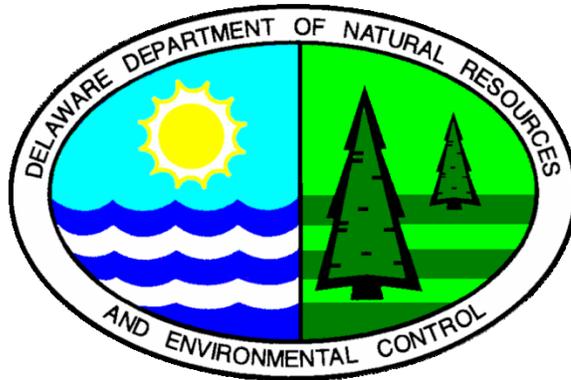
SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES FOR DIOXIN AND DIOXIN-LIKE COMPOUNDS (current year only)

8.1a	8.1b	8.1c	8.1d	8.2	8.3	8.4	8.5	8.6	8.7	8.8
Total onsite disposal to Class 1 Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	Total other onsite disposal or other releases	Total offsite disposal to Class 1 Underground Injection Wells, RCRA Subtitle C landfills, and other landfills	Total other offsite disposal or other releases	Quantity used for energy recovery onsite	Quantity used for energy recovery offsite	Quantity recycled onsite	Quantity recycled offsite	Quantity treated onsite	Quantity treated offsite	Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										

Supplemental Schedule 1
For Dioxin Reporting
Page 4
For Reporting Year 2009

Column f. Mass (grams) of Each Compound in the category (1-17)

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EPCRA Reporting Program
Emergency Prevention and Response Branch, DNREC
156 South State Street
Dover, DE 19901
(302) 739-9405

The Department of Natural Resources and Environmental Control
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