2004 TRI Public Data Release eReport

Summary of Key Findings

For full report: epa.gov/tri/tridata/tri04

April 2006

U.S. EPA Toxics Release Inventory
Reporting Year 2004 Public Data Release

Summary of Key Findings

U.S. EPA TRI Program

The United States (U.S.) Environmental Protection Agency (EPA) Toxics Release Inventory (TRI) program collects information on the disposal or other releases and other waste management activities for over 650 chemicals from industrial sources in all 50 states and the U.S. territories. The information has been collected annually since 1987. For 2004, the latest year for which data are available, disposal or other releases of TRI chemicals totaled over 4.24 billion pounds from over 23,600 U.S. facilities submitting almost 90,000 chemical forms.

The 2004 TRI data are now available online in a searchable, sortable format at http://www.epa.gov/triexplorer. We invite you to visit our web site and explore the data to learn more about toxic chemical releases and waste management activities across the U.S., by state, county or even zip code – and more!

The following information reflects the TRI data as of April 2006.

Overview of the TRI 2004 Public Data Release

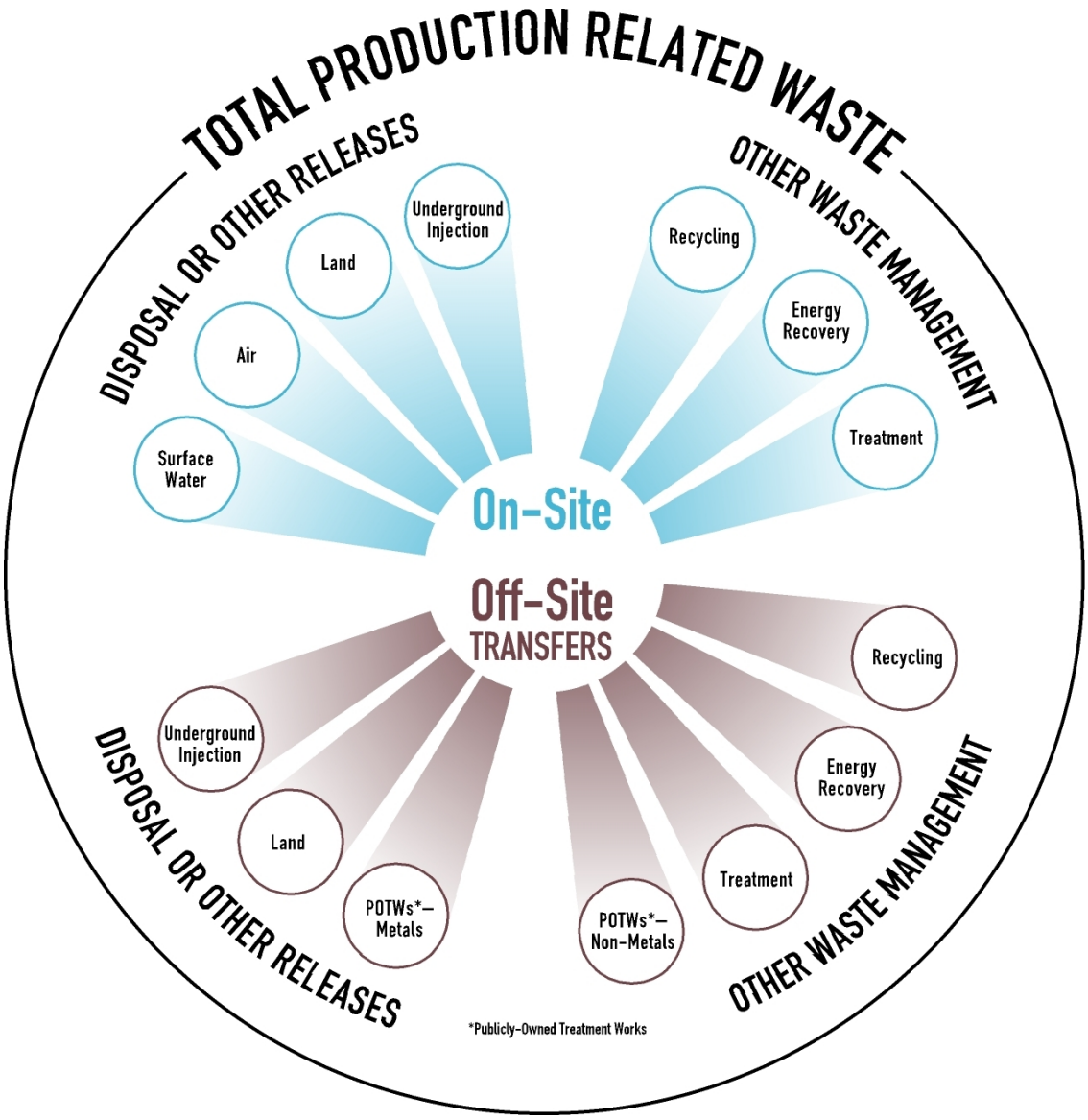
The time period covered for this year's data release is January 1, 2004, to December 31, 2004. These 2004 data were reported to EPA by July 1, 2005, and were released to the public in April 2006. Data for previous years back to 1988 are also available.

A TRI release to the environment includes disposal or other releases. What does this mean?

Based on the definition of release in Section 329 of the Emergency Planning and Community Right-to-Know Act (EPCRA), facilities that place TRI chemicals in on-site underground injection wells, landfills, surface impoundments, or send them off-site to other facilities for placement in underground injection wells, landfills, and/or surface impoundments are considered to have disposed of or otherwise released these chemicals. Metals sent to Publicly Owned Treatment Works (POTWs) or other waste treatment facilities are also included.

Other ways facilities release TRI chemicals is by discharging them to an environmental medium on-site such as air emissions and discharges to receiving streams or water bodies.

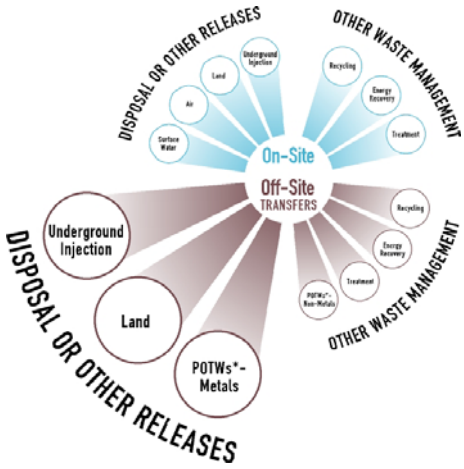
The diagram below shows the types of data collected under the TRI program. They include on-site disposal or other releases, off-site disposal or other releases, and other waste management. The entire body of data is referred to as total production related waste.



The following categories are used for presenting this information:

On-site disposal or other releases: On-site disposal or other releases include emissions to the air, discharges to bodies of water, disposal at the facility to land, and disposal in underground injection wells. Disposal or other releases are reported to TRI by media type. (On-site disposal or other releases are reported in Section 5 of Form R.) Some types of disposal are controlled to limit potential for human exposures and environmental contamination. The TRI data can be broken down in some detail based on how the chemical is managed.

Off-site disposal or other releases (transfers off-site to disposal or other releases): An off-site disposal or other release is a discharge of a chemical to the environment that occurs as a result of a facility's transferring a waste containing a TRI chemical off-site for disposal or other management (reported in Section 6 of Form R). Certain other types of transfers are also categorized as off-site disposal or other release because, except for location, the outcome of transferring the chemical off-site is the same as disposing of it or releasing it on-site. For each transfer, the amount of the chemical in the waste, type of management activity (chosen from a list of codes referred to as "M" codes) undertaken by the receiving facility, and the address of the receiving site are reported.



Total on- and off-site disposal or other releases: sum of on-site disposal or other releases and off-site disposal or other releases.

Other waste management of TRI chemicals: On- and off-site information about facilities' management of TRI chemicals includes amounts of the chemicals recycled, burned for energy recovery, and treated from Section 8 of Form R.

What are the time periods used for presenting TRI data?
To ensure comparable data are used when representing data trends, several different time periods for data are presented. The data included in each time period differ because the reporting requirements have changed over time. Chemicals that have been removed from the TRI list are excluded. Time periods used for the Public Data Release include:

2001-2004: includes all chemicals and all industries reporting for 2001 through 2004

2000-2004: excludes lead and lead compounds because reporting thresholds for lead were lowered beginning with the 2001 reporting year.

1998-2004: excludes all Persistent, Bioaccumulative, Toxic (PBT) chemicals and vanadium and vanadium compounds. Some PBT chemicals were added and reporting thresholds were

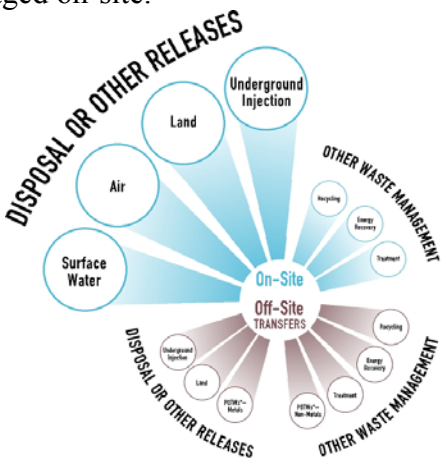
lowered for others beginning with the 2000 reporting year. The reporting definition for vanadium was changed and vanadium compounds were added to the list for 2000, however vanadium and its compounds are not classified as a PBT chemical.

1988-2004: excludes aluminum oxide, ammonia, hydrochloric acid, sulfuric acid, PBT chemicals, vanadium and vanadium compounds. These chemicals have had changes to reporting requirements or have been added to the TRI chemical list since 1988. Also, excludes chemicals added to the list in 1990, 1994 and 1995. Also, excludes reporting from industries added to the reporting requirements beginning with the 1998 reporting year (these industries are metal mining, coal mining, electrical utilities, chemical wholesale distributors, petroleum bulk terminals/bulk storage, hazardous waste treatment facilities and solvent recovery facilities).

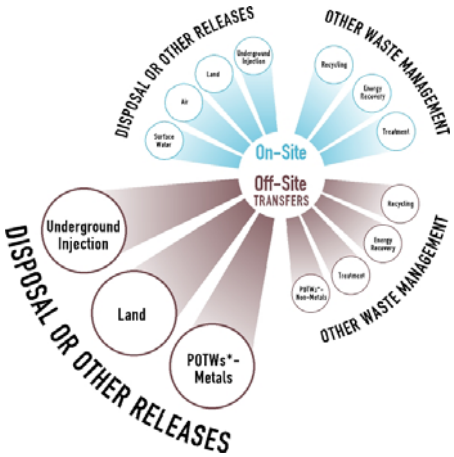
What are other considerations in looking at the 2004 Public Data Release?
The chemical, methyl ethyl ketone, has been removed from the TRI list as a result of a court decision. Reports for this chemical are no longer included in the analyses.

Overview of the TRI 2004 Data

What was the total reported for disposal or other releases for 2004?
Over 4.24 billion pounds were disposed of or otherwise released to the environment in 2004 by facilities that are required to report to EPA under EPCRA section 313. Most of the chemicals are managed on-site.



- 87% (3.71 billion pounds) was disposed of or otherwise released **on-site**, including
  - 1.55 billion pounds (36%) of air emissions
  - 721 million pounds (17%) in surface impoundments other than RCRA Subtitle C surface impoundments
  - 602 million pounds (14%) in Class I (hazardous waste) underground injection wells, RCRA Subtitle C (hazardous waste) landfills and other landfills
  - 541 million pounds (13%) of other land disposal (such as waste piles, spills or leaks)



- 13% (536 million pounds) was sent **off-site** for disposal or other releases, including
  - 350 million pounds (8%) to Class I (hazardous waste) underground injection wells, RCRA Subtitle C landfills and other landfills
  - 78 million pounds (2%) of metals sent for solidification and/or stabilization

As noted above, 14% of total disposal or other releases were in on-site Class I wells, RCRA Subtitle C and other landfills and 8% were in off-site Class I wells, RCRA Subtitle C and other landfills. These facilities may limit contamination and human exposure by disposing of or otherwise releasing waste in certain ways. For example, disposal of harmful materials in Class I Underground Injection wells located in isolated formations beneath the lowermost underground source of drinking water limits potential for contamination. Similarly, disposal to landfills that are designed with liners, covers, leak detection systems, and groundwater monitoring systems also limits the potential for human exposure and contamination.

What are the other waste management quantities for 2004?

TRI chemicals managed through recycling, energy recovery or treatment totaled 21.8 billion pounds in 2004.

- 9.53 billion pounds was recycled on- and off-site.
- 9.00 billion pounds was treated on- and off-site.
- 3.26 billion pounds was combusted for energy recovery on- and off-site.

The Pollution Prevention Act of 1990 (PPA) requires facilities to report information about the quantities of TRI chemicals they manage in waste, both on-and off-site, including amounts reported as recycled, burned for energy recovery, or treated.

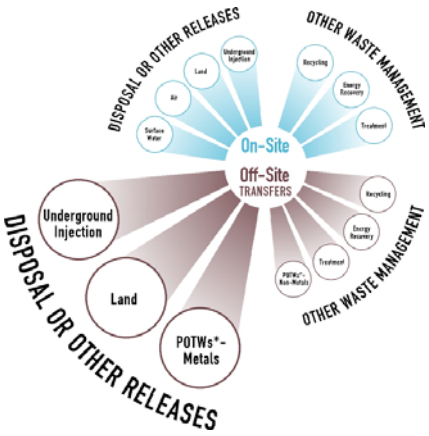
How do the 2004 TRI data compare to the 2003 TRI data?

In this section, we will present both net changes from 2003 to 2004, and underlying shifts in management methods. Sometimes a specific method of handling a chemical may increase, even though the overall trend is a decrease.

Overall, when compared to quantities reported for the previous year (2003), total disposal or other releases of TRI chemicals showed a **decrease,** of 4% (171 million pounds).

- On-site disposal or other releases **decreased** by 198 million pounds (5%).
  - ► Surface impoundments other than RCRA Subtitle C surface impoundments **decreased** by 96 million pounds (12%),
  - ► Land disposal other than landfills (such as waste piles, spills and leaks) **decreased** by 66 million pounds (11%),
  - ► RCRA Subtitle C and other landfills **decreased** by 46 million pounds (11%)
  - ► Air emissions **decreased** by 24 million pounds (2%),
  - ► However, surface water releases **increased** by 21 million pounds (10%),
- ► Class II-V underground injection wells **increased** by 5.7 million pounds (26%),
- ► Land treatment **increased** by 3.9 million pounds (25%), and
- ► Class I underground injection wells **increased** by 3.0 million pounds (1%).

- Off-site disposal or other releases **increased** by 27 million pounds (5%).
  - RCRA Subtitle C landfills **increased** by 13 million pounds (25%),
  - Land disposal other than landfills (such as waste piles, spills and leaks) **increased** by 7 million pounds (23%), and
  - Class I underground injection wells **increased** by 4 million pounds (54%).



What are some of the reasons for the overall decrease in disposal or other releases from 2003 to 2004?
The metal mining sector had a decrease of 14% (168 million pounds) from 2003. This sector, which also had a large decrease from 2001 to 2003, may still be adjusting their reporting to conform to a court case, Barrick v. EPA. The decrease could also be due to decreases in mining activity or other factors.

Which industry sectors reported the largest decreases in disposal or other releases, 2003-2004?

- The metal mining sector reported the largest total disposal or other releases in 2004 (1.07 billion pounds) and the largest **decrease** in disposal or other releases from 2003: 168 million pounds (14%).
- Hazardous waste/solvent recovery facilities reported 195 million pounds in 2004 and the second largest **decrease** in disposal or other releases from 2003: 38 million pounds (16%) from 2003.
- Electric utilities reported the second largest total disposal or other releases in 2004 (1.05 billion pounds), with a **decrease** of 16 million pounds (1.5%) from 2003.

Which industry sectors reported the largest increases in disposal or other releases, 2003-2004?

- The paper industry reported 229 million pounds in 2004, an **increase** of 15.1 million pounds (7%) from 2003.
- The food industry reported 165 million pounds in 2004, an **increase** of 14.8 million pounds (10%) from 2003.
- Petroleum refiners reported 81 million pounds in 2004, an **increase** of 10.5 million pounds (15%) from 2003.

How did total production related waste managed change from 2003 to 2004?
The preferred measure of environmental progress is reduction in TRI releases. To the extent that releases are still occurring, another measure of progress may be seen in changes in management practices, in a way that limits potential for human exposure and environmental contamination. We have seen a shift from 2003 to 2004 in how TRI chemical releases are managed.

Total production related waste **increased** by 4% (1.10 billion pounds) from 2003 to 2004. This included an overall **decrease** in the quantity disposed of or otherwise released of 4% (188 million pounds) and increases in some types of other waste managed.

- Treatment on-site **increased** by 11% (828 million pounds).
- Recycling on-site **increased** by less than 1% (7.8 million pounds.
- However, energy recovery on-site **decreased** by 1% (20 million pounds).

- Recycling off-site **increased** by 22% (419 million pounds)
- Treatment off-site **increased** by 9% (45 million pounds)
- Energy recovery off-site **decreased** by less than 1% (1.4 million pounds)

Which types of facilities had the largest disposal or other releases in 2004?

As part of the annual PDR, EPA has historically provided a list of facilities that have the largest disposal or other releases of TRI chemicals to the environment. It is important to note that these facilities do not necessarily pose the greatest risk to the environment. As explained in detail in the EPA report, ***Factors to Consider When Using TRI Data*** (available at www.epa.gov/tri/tridata), total quantities of TRI chemicals released or otherwise disposed of is one important factor among several that determine the potential risk that may be posed.

This year, EPA is presenting the "Top 50" facilities with largest disposal or other releases in charts that are available on this web site (www.epa.gov/tri). It is important to note that there is a huge variation in the amounts of TRI chemicals released per facility. In 2004, the range of TRI disposal or other releases is from 0 to 458 million pounds. The average release of TRI chemicals per facility is approximately 179,300 pounds. The reason some facilities have releases far in excess of the average are several:

- Certain industry sectors, such as mining, smelting, and the electric power industries, process large volumes of material and not surprisingly the totals for TRI chemicals are also larger than average.
- Even within a given sector, certain facilities are simply larger (in terms of economic parameters such as production levels, sales, employment, etc.) and so they process relatively large amounts of input material to produce large amounts of output material (product). And,
- Facilities differ in their relative efficiency in processing material, i.e., for a given unit of output, facilities differ in the amount of release or waste that is produced.

As one might expect, the facilities with the largest disposal or other releases are mining facilities. In fact, the top 6 facilities, which each have over 45 million pounds of total on and off-site disposal or other releases, are mining operations. Other facilities in the Top 50 include a variety of industries, with disposal or other release totals ranging from 11 million to 35 million pounds.

EPA also presents facility rankings taking into account the management methods used for the TRI chemicals. In addition to presenting the Top 50 facilities with largest total on- and off-site disposal or other releases, we also present the Top 50 facilities with total disposal or other releases, subtracting out the totals that are managed in Class I underground injection wells, Subtitle C landfills, and other landfills. As discussed above, this second group of rankings is perhaps a better, although still imperfect, indication of the amount of TRI chemicals that may be available to the environment. In this second group of rankings, a limited number of facilities that manage TRI chemicals mostly or totally in Class I wells or landfills drop down in the rankings, or drop out of the Top 50 altogether. (The top 6 mining facilities mentioned above remain the top 6 in these rankings, however.)

Finally, for similar reasons, EPA has provided two sets of rankings (top 20) of US counties with the largest releases. One set of rankings shows total disposal or other releases, and the second shows total disposal or other releases, adjusted to subtract out quantities in Class I wells and landfills. As with facilities, the very top (in this case 5) counties do not change, but there is some shifting in the next 15 to reflect that some counties are home to Class I wells or landfills, and when those totals are not counted, they are no longer among the counties with the most TRI chemical releases.

Federal Facilities

All federal facilities, whether operated by federal agencies or contractors (e.g. some military bases), are required to report to EPA's TRI Program.

- For 2004, 313 federal facilities reported 90 million pounds of total on- and off-site disposal or other releases.
- Disposal or other releases by federal facilities **increased** by 13 million pounds (16%) from 2003 to 2004.
- Total production related waste managed at federal facilities **increased** by 20 million pounds or 10% from 2003 to 2004.

> **What are some of the reasons for the increase from 2003 to 2004?**
> *The Tennessee Valley Authority utilities reported 77% of the total disposal or other releases from federal facilities for 2004 and an increase in total disposal or other releases of 12 million pounds (22%) from 2003 to 2004, including an increase of 11 million pounds in air emissions, primarily sulfuric acid.*

2004 Chemical Snapshots

PERSISTENT BIOACCUMULATIVE TOXIC (PBT) CHEMICALS

2004 is the fifth year that TRI includes data, at reduced reporting thresholds, on PBT chemicals such as dioxins, mercury, and polychlorinated biphenyls (PCBs). It is the fourth year of TRI reporting data for lead and lead compounds at reduced thresholds.

Why is there particular concern for PBT chemicals?
PBT chemicals are of particular concern not only because they are toxic, but also because they remain in the environment for long periods of time and are not readily destroyed (they persist) and build up or accumulate in body tissues (they bioaccumulate).

What were the top PBT chemicals disposed of or otherwise released in 2004?

- 98% (445 million pounds) of total disposal or other releases of PBT chemicals in 2004 was accounted for by lead and lead compounds.
- Other disposal or other releases of PBT chemicals in 2004 included:
  - 4.8 million pounds of mercury and mercury compounds,
  - 2.4 million pounds of polycyclic aromatic compounds (PACs), and
  - 1.9 million pounds of polychlorinated biphenyls (PCBs).
- 111,472 **grams** (approximately 246 pounds) of total disposal or other releases of PBT chemicals in 2004 were accounted for by dioxin and dioxin-like compounds.

What were the total PBT disposal or other releases for 2004?

Total disposal or other releases of PBT chemicals reported were 455 million pounds in 2004.

- 93% (425 million pounds) were disposed of or otherwise released **on-site**, including
  - 55% (250 million pounds) in other land disposal (such as waste piles, spills or leaks).
  - 27% (121 million pounds) in on-site surface impoundments other than RCRA Subtitle C surface impoundments.
  - 9% (42 million pounds) to Class I wells, RCRA Subtitle C landfills and other landfills.
- 7% (30 million pounds) were disposed of or otherwise released **off-site**.
  - 4% (17 million pounds) of **off-site** disposal and other releases were to Class I wells, RCRA Subtitle C landfills and other landfills.

How do the 2004 PBT data compare to the 2003 PBT data?

Overall, when compared to quantities reported for the previous year (2003), total disposal or other releases of persistent bioaccumulative and toxic (PBT) chemicals **decreased** by 4.1 million pounds or 1% from 2003 to 2004.

- Lead and lead compounds **increased** by 17 million pounds (4%)
- Mercury and mercury compounds **decreased** by 1 million pounds (16%)
- Polychlorinated biphenyls (PCBs) **decreased** by 20 million pounds (92%), including one hazardous waste facility that reported disposal in RCRA Subtitle C landfill of 16 million pounds in 2003 but 27,000 pounds in 2004.
- Polycyclic aromatic compounds **increased** by over 185,000 pounds (8%).

On- and off-site disposal or other releases of PBT chemicals in RCRA Subtitle C landfills, other landfills and Class I underground injection wells totaled 59 million pounds in 2004 (13% of total disposal or other releases). They **decreased** by 36 million pounds (38%) from 2003 to 2004.

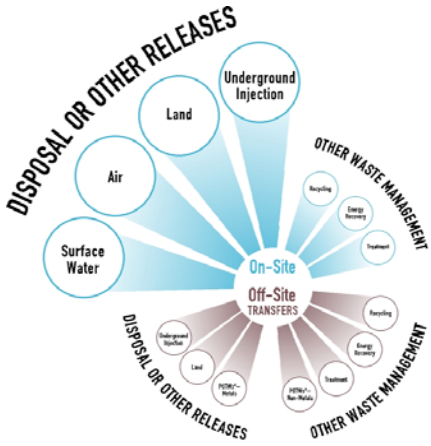
- On-site RCRA Subtitle C landfills **decreased** by 25 million pounds (51%)
- Other on-site landfills **decreased** by 11 million pounds (36%)
- Other off-site landfills **decreased** by 1 million pounds (8%).
- However, off-site RCRA Subtitle C landfills **increased** by 204,526 pounds (6%) and
- Class I wells on- and off-site **increased** 55,202 pounds (14%).

LEAD AND LEAD COMPOUNDS

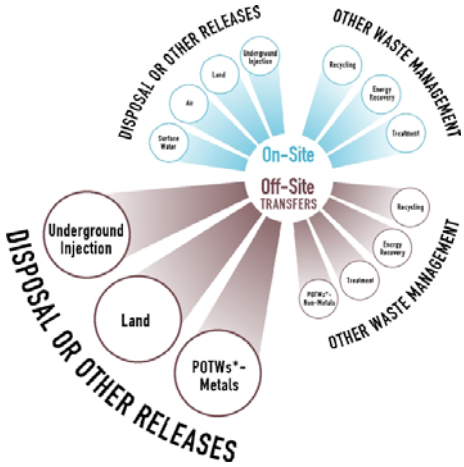
The reporting threshold for lead and lead compounds was lowered beginning with the 2001 reporting year so this is the fourth year of reporting under the lowered threshold.

What were the total reported disposal or other releases of lead and lead compounds for 2004?

Total disposal or other releases of lead and lead compounds were 445 million pounds for 2004.



- 94% (417 million pounds) was disposed of or otherwise released **on-site**, including:
  - 247 million pounds (56%) of other land disposal (such as waste piles, spills or leaks);
  - 120 million pounds (27%) to surface impoundments, other than RCRA Subtitle C surface impoundments; and
  - 1.1 million pounds (0.3%) of air emissions.
- 6% (28 million pounds) were **off-site** disposal or other releases



How do the 2004 data compare to 2003 and to 2001 (the first year of reporting under the lower threshold) for lead and lead compounds?

From **2003 to 2004** disposal or other releases for lead and lead compounds **increased** by 17 million pounds or 4%.

- The metal mining sector accounted for 83% of the total disposal or other releases in 2004 and an **increase** of 8% from 2003 to 2004.
- Without the metal mining sector, total on- and off-site disposal or other releases of lead and lead compounds **decreased** by 11% from 2003 to 2004.
- Some industry sectors reported **decreases**, including:
  - Hazardous waste management facilities, with a **decrease** of 18% from 2003 to 2004;
  - Primary metals facilities, with a **decrease** of 12% from 2003 to 2004; and
  - Electric utilities, with a **decrease** of 5% from 2003 to 2004.

On- and off-site disposal or other releases of lead and lead compounds in RCRA Subtitle C landfills, other landfills and Class I underground injection wells totaled 110 million pounds in 2004 (25% of total disposal or other releases). They **decreased** by 31 million pounds (22%) from 2003 to 2004.

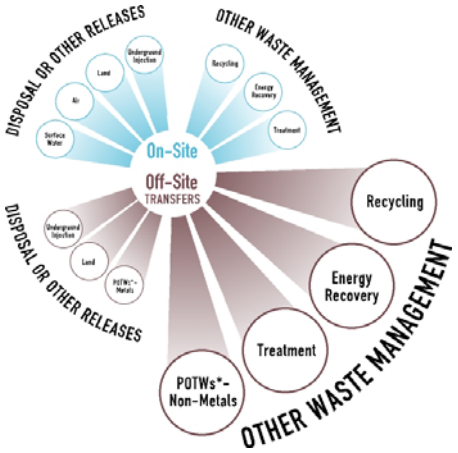
- On-site RCRA Subtitle C landfills **decreased** by 8 million pounds (27%)
- Other on-site landfills **decreased** by 6 million pounds (26%)
- Other off-site landfills **decreased** by 1.4 million pounds (11%).
- However, off-site RCRA Subtitle C landfills **increased** by 246,967 pounds (10%) and
- Class I wells on- and off-site **increased** by 54,753 pounds (14%).

Lead and lead compounds disposal or other releases **increased** by 25 million pounds or 6% from **2001 to 2004**.

- The metal mining sector had an **increase** of 10% from 2001 to 2004.
- Without the metal mining sector total disposal or other releases of lead and lead compounds **decreased** by 10% from 2001 to 2004.
- Some industry sectors reported **decreases**, including:
  - Primary metals facilities, with a **decrease** of 24% from 2001 to 2004; and
  - Electric utilities, with a **decrease** of 13% from 2001 to 2004.
- Facilities reporting zero disposal or other releases represented about 18% of all facilities (1,525 facilities) reporting lead and lead compounds in 2004 and about 20% in 2001 (1,789 facilities).

What were the other waste managed totals for lead and lead compounds for 2004?
Total production related waste managed for lead and lead compounds was 1.2 billion pounds for 2004. Most of the lead waste was recycled.

- 63% (768 million pounds) was recycled, mostly recycling **on-site** (468 million pounds).
  - 349 million pounds was recycled on-site by primary metals facilities.
- 37% (452 million pounds) was the quantity of lead and lead compounds managed as **on-site** disposal or other releases.
  - Metal mining had 369 million pounds, mainly as on-site disposal or releases other than to landfills or underground injection.
  - 189 million pounds was recycled **off-site** by electronic/electrical equipment manufacturers.



Total production related waste managed for lead and lead compounds **decreased** by less than 1% (7 million pounds) from 2003 to 2004 and had an overall **decrease** of 2% (25 million pounds) from 2001 to 2004.

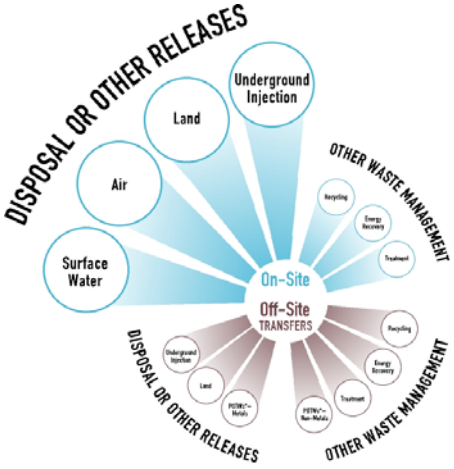
- Recycling **decreased** by 3% from 2003 to 2004 and by 6% from 2001 to 2004.
- Quantity disposed of or otherwise released **increased** by 4% from 2003 to 2004 and by 6% from 2001 to 2004.

Of the industry sectors reporting the largest amounts of lead and lead compounds:

- Total production related waste managed by the metal mining sector **increased** by 7% from 2003 to 2004 and by 10% from 2001 to 2004.
- Total production related waste managed by the electronic/electrical equipment sector **increased** by 14% from 2003 to 2004 but had an overall **decrease** of 7% from 2001 to 2004.
- Total production related waste managed by the primary metals sector **decreased** by 11% from 2003-2004 and by less than 1% from 2001 to 2004.

MERCURY AND MERCURY COMPOUNDS

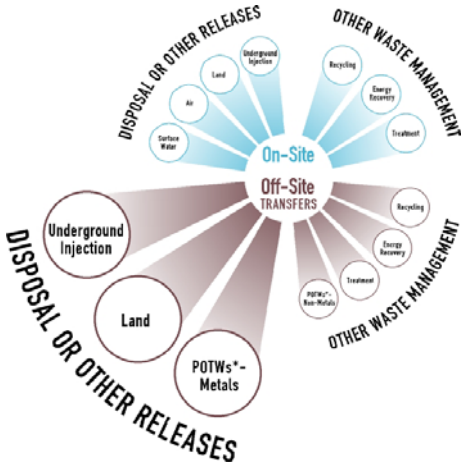
The reporting threshold for mercury and mercury compounds was lowered to 10 pounds beginning with reporting year 2000, so this is the fifth year of reporting under the lowered threshold.



What were the total mercury and mercury compounds disposal or other releases for 2004?

Total disposal or other releases of mercury and mercury compounds were 4.8 million pounds in 2004.

- 96% (4.6 million pounds) were **on-site** disposal or other releases, including
  - 2.6 million pounds (54%) of other land disposal (such as waste piles, spills or leaks)
  - 1.5 million pounds (31%) of surface impoundments, other than RCRA Subtitle C surface impoundments
  - 140,697 pounds (3%) of air emissions
- Two metal mining facilities accounted for 64% (3.1 million pounds) of the total on- and off-site disposal or other releases of mercury and mercury compounds for 2004.
  - These facilities reported disposal or other releases mainly to on-site surface impoundments and on-site landfills other than RCRA Subtitle C landfills.
- 4% (216,402 pounds) were **off-site** disposal or other releases.



Which industry sectors reported the largest disposal or other releases of mercury and mercury compounds in 2004?

- The metal mining industry reported the largest disposal or other releases of mercury and mercury compounds (85% of the total mercury and mercury compounds disposal or other releases).
- Electric utilities reported the largest air emissions of any industry sector, with 67% of all air emissions of mercury and mercury compounds.
- Hazardous waste/solvent recovery facilities reported the largest off-site disposal or other releases (off-site transfers to disposal) of mercury and mercury compounds with 74% of all off-site disposal or other releases.

How do the 2004 data compare to data for 2003 for mercury and mercury compounds?
From **2003 to 2004**, disposal or other releases for mercury and mercury compounds **decreased** by 16% (over 950,000 pounds).

- Without the two largest metal mining facilities, total on- and off-site disposal increased 18% (over 267,000 pounds).
- Total on-site disposal or other releases **decreased** by 17% (1.0 million pounds), including
  - ► a **decrease** of 1.1 million pounds (29%) in other land disposal (waste piles, spills and leaks).
  - ► However, on-site air emissions **increased** by 2,640 pounds (2%).
- Total off-site disposal or other releases **increased** by 12% (23,884 pounds).

What caused the increase in on-site air emissions of mercury and mercury compounds?
Electric utilities reported 67% of all air emissions of mercury and mercury compounds in 2004 and increased these emissions by 4,268 pounds, from 90,337 pounds in 2003 to 94,605 pounds in 2004.

On- and off-site disposal or other releases of mercury and mercury compounds in RCRA Subtitle C landfills, other landfills and Class I underground injection wells totaled 474,229 pounds in 2004 (10% of total disposal or other releases). They **increased** by almost 110,000 pounds (30%) from 2003 to 2004.

- On-site RCRA Subtitle C landfills **increased** by 74,290 pounds (29%)
- Off-site RCRA Subtitle C landfills **increased** by 48,384 pounds (135%).
- However, other off-site landfills **decreased** by 14,625 pounds (44%).

From **2000 to 2004** (over five years), disposal or other releases for mercury and mercury compounds **increased** by 29% (1.1 million pounds).

- Total on-site disposal or other releases **increased** by 34% (1.2 million pounds)
  - ► Two metal mining facilities reported a combined **increase** of almost 1 million pounds from 2000 to 2004.
  - ► Without reporting by these two facilities, disposal or other releases of mercury and mercury compounds **increased** by 10% (162,301 pounds) from 2000 to 2004.
- On-site air emissions of mercury and mercury compounds **decreased** by 20,000 pounds (12%) from 2000 to 2004.

DIOXIN AND DIOXIN-LIKE COMPOUNDS

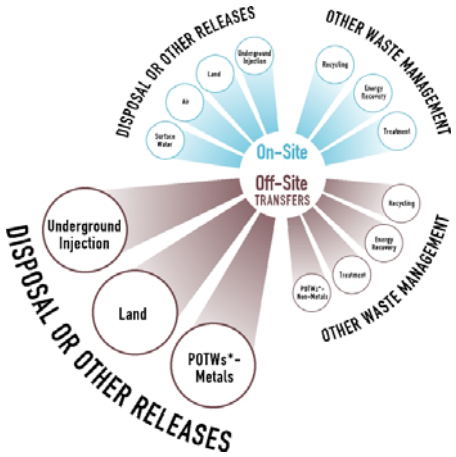
Dioxin and dioxin-like compounds were added to the TRI list for reporting year 2000 at a lowered reporting threshold of 0.1 grams.

What were the total disposal or other releases for dioxin and dioxin-like compounds in 2004?

Total disposal or other releases for dioxin and dioxin-like compounds were 111,472 grams (approximately 246 pounds) in 2004.

- 60% (66,815 grams or 147 pounds) were **on-site** disposal or other releases, including
  - 1,234 grams or 2.7 pounds (1%) of air emissions

- 40% (44,657 grams or 98 pounds) were **off-site** disposal or other releases, including
  - 41,365 grams or 91 pounds of disposal in RCRA Subtitle C and other landfills



How do the 2004 data compare to data for 2003 and 2000 (the first year of reporting under the lowered threshold) for dioxins and dioxin-like compounds?

From **2003 to 2004**, total disposal or other releases of dioxin and dioxin-like compounds **decreased** by 155,164 grams or 342 pounds (58%).

- One facility reported a decrease of 137,087 grams or 302 pounds from 2003 to 2004 due to transferring waste, such as telephone poles, off-site in 2003.
- On-site disposal or other releases **decreased** by 1% (464 grams or 1 pound).
  - On-site air emissions **decreased** by 1,211 grams or 2.7 pounds (50%) from 2003 to 2004.
- Off-site disposal or other releases **decreased** by 78% (154,700 grams or 341 pounds).

On- and off-site disposal or other releases of dioxins and dioxin-like compounds in RCRA Subtitle C landfills, other landfills and Class I underground injection wells totaled 100,170 grams or 221 pounds in 2004 (90% of total disposal or other releases). They **decreased** by 156,736 grams or 346 pounds (61%) from 2003 to 2004.

- Off-site landfills other than RCRA Subtitle C landfills **decreased** by 152,978 grams or 337 pounds (82%)
- Off-site RCRA Subtitle C landfills **decreased** by 4,104 grams or 9.1 pounds (33%)
- On-site RCRA Subtitle C landfills **decreased** by 4,299 grams or 9.5 pounds (12%)
- However, other on-site landfills **increased** by 4,709 grams or 10.4 pounds (21%).

From **2000 to 2004**, total disposal or other releases of dioxin and dioxin-like compounds **increased** by 12,616 grams or 28 pounds (13%).

- On-site air emissions **decreased** by 2,515 grams or 5.6 pounds (67%) from 2000 to 2004.

Looking at TRI data over the years

TRI DATA, 1998-2004

Over the six years from 1998 to 2004, total on- and off-site disposal or other releases of TRI chemicals **decreased** by 45 % (by 3.00 billion pounds).

- The metal mining sector reported an overall **decrease** of 2.3 million pounds (77%).
- Without the metal mining sector, total disposal or other releases **decreased** by 18% (by 679 million pounds).

Total production related waste managed **decreased** by 10% (2.85 billion pounds) from 1998 to 2004.

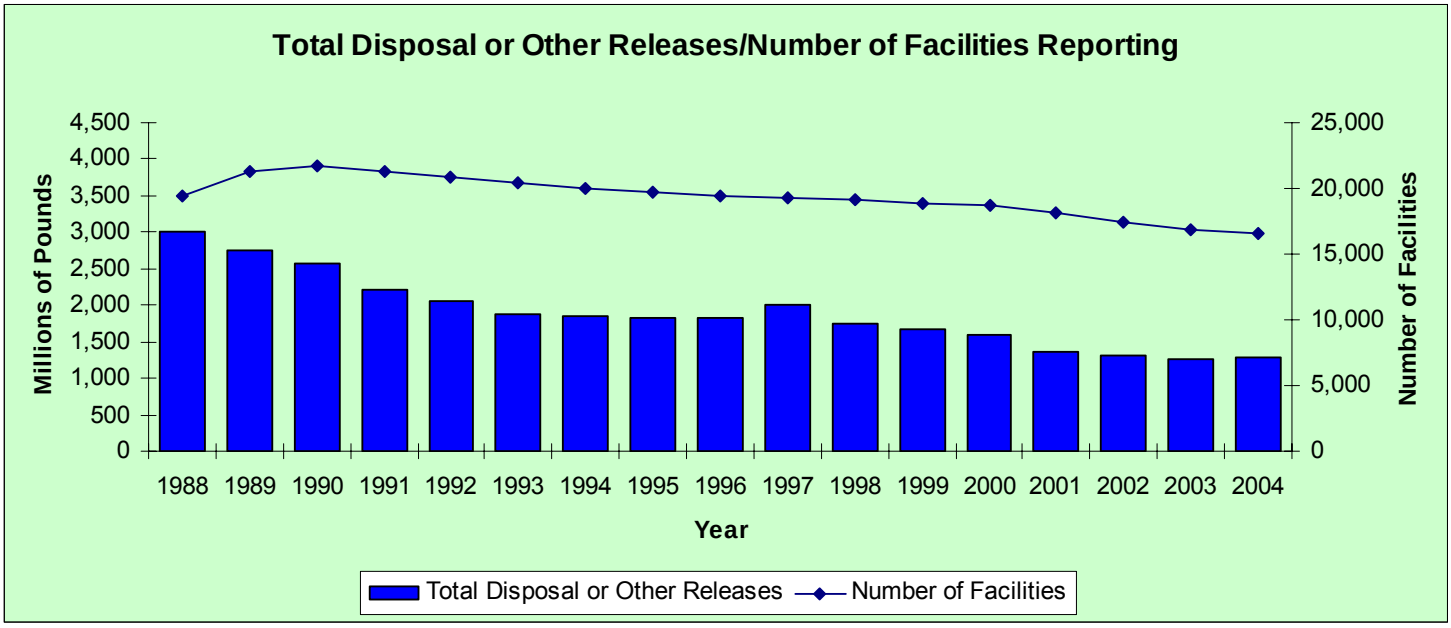
- Quantity disposed of or otherwise released **decreased** by 44% (3.00 billion pounds)
- Recycling on- and off-site **decreased** by 4% (390 million pounds)
- Energy recovery on- and off-site **decreased** by 6% (216 million pounds)
- However, treatment on- and off-site **increased** by 9% (755 million pounds)

Average per facility, 1998-2004

	1998	2004	% Change
	Pounds/facility	Pounds/facility	Percent
Total Production Related Waste Managed			
All Industry Sectors	1,182,962	1,212,575	+2.5%
Without metal mining/primary metals	1,003,765	1,133,205	+13%
Total Disposal or Other Releases			
All Industry Sectors	291,983	186,882	-36%
Without metal mining/primary metals	148,477	141,649	-5%

TRI DATA, 1988-2004

Over the seventeen years from 1988 to 2004, total on- and off-site disposal or other releases of TRI chemicals **decreased** by 57 percent (by 1.71 billion pounds), looking at trends in the industries and chemicals that have been consistently reported since that time. The number of facilities reporting **decreased** by 15 percent over that same time period. This decrease only takes into consideration the 1988 core set of chemicals (i.e., those chemicals that have been on the TRI list 1988 and have had the same reporting definition since 1988).



Note: Data are from TRI Form, Sections 5 (all parts) and 6.1 (metals and metal compounds only) and 6.2 (Disposal codes only and metals and metal compounds reported under codes M40 and M61). Does not include delisted chemicals, chemicals added in 1990, 1994 and 1995, aluminum oxide, ammonia, hydrochloric acid, PBT chemicals, sulfuric acid, vanadium and vanadium compounds. For the years 1998 and after, does not include industries, other than manufacturing industries, that are required to report for 1998 and later years only. Data as of April 2006.