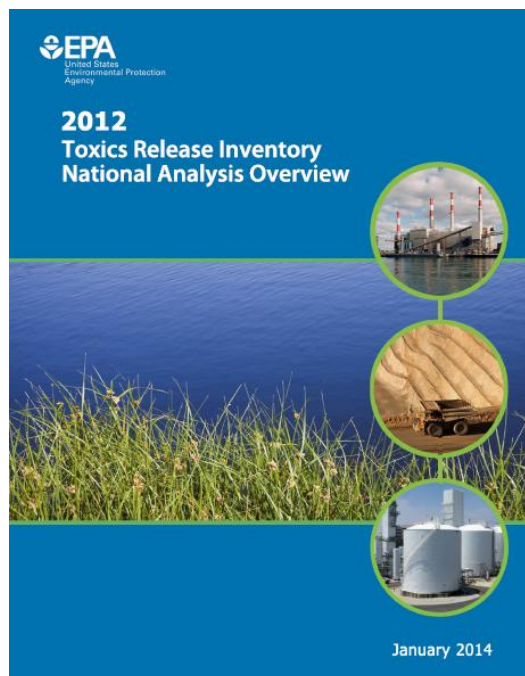




Introduction to the Toxics Release Inventory and the 2012 TRI National Analysis Report





Overview

- Introduction to TRI
- Reporting Year 2012 TRI National Analysis
- Analysis at a local level
- Using TRI Explorer to analyze TRI data
- Questions & Discussion

Why was the Toxics Release Inventory created?

Bhopal, India December 1984

- Methyl isocyanate gas released at a Union Carbide chemical plant
- Thousands died the first night
- Thousands more have died due to long-term health effects
- Survivors continue to suffer with permanent disabilities



Bhopal memorial for those killed and disabled by the 1984 toxic gas release

Institute, West Virginia August 1985

- Chemical release at a similar facility in the U.S.
- Over 100 people hospitalized

Increased concern in the U.S. about chemical accident preparedness and availability of information on toxic chemical releases from industrial facilities

What is the Toxics Release Inventory (TRI)?

- TRI tracks the management of certain toxic chemicals that pose a threat to human health and the environment.
- TRI includes information on:



Releases



Waste
transfers



Recycling

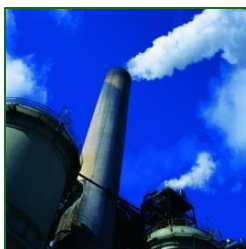


Pollution
prevention

And
much
more!

What is a “release”?

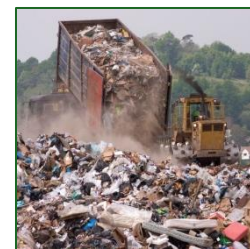
- A **"release"** refers to different ways that toxic chemicals from industrial facilities enter the:



Air



Water



Land

- The likelihood of residents coming into contact with toxic chemicals depends on the type of release and other factors

For more information, see “*Factors to Consider When Using TRI Data*” at:

www2.epa.gov/sites/production/files/2013-09/documents/tri_factors_to_consider_2013.pdf



Which facilities must report to TRI?

1. Facility must be in a TRI-covered industry sector or category, including:



Manufacturing



**Coal/Oil
electricity
generation**



**Certain Mining
Facilities**



**Hazardous
Waste
Management**



Federal Facilities

2. Facility must have the equivalent of at least **10 full-time employees**

3. Facility must manufacture, process or use more than a **certain amount of a TRI toxic chemical per year**

If a facility meets these criteria, it must **submit a TRI reporting form for each TRI-listed chemical** it manufactures, processes, or otherwise uses in quantities above the reporting threshold



What information do facilities report to TRI?

- On-site releases of TRI chemicals to:
 - Air
 - Water
 - Land
- Transfers of chemical waste to off-site locations
- Waste management:
 - Recycling
 - Treatment
 - Energy Recovery
- Pollution prevention activities (www.epa.gov/tri/p2)





Considerations When Using TRI

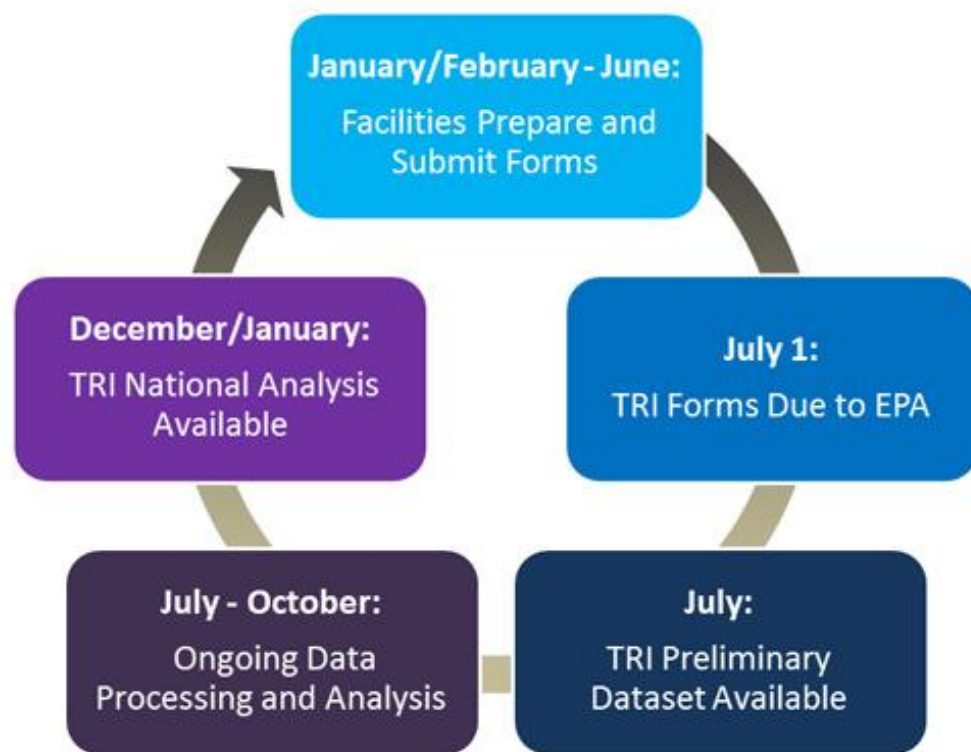
- Covers an important subset of toxic chemicals managed at U.S. facilities, but doesn't cover all chemicals or facilities
- Data reflect annual emissions and don't indicate the frequency or duration
- Quantities reflect chemicals released into air and water and managed through recycling, energy recovery, treatment and disposal
- Toxicity level varies among the chemicals on the TRI list
- TRI doesn't include information about public exposure to chemicals
- TRI facility operations and releases are regulated under other EPA programs designed to limit human and environmental harm

For more information, see “*Factors to Consider When Using TRI Data*” at:

www2.epa.gov/sites/production/files/2013-09/documents/tri_factors_to_consider_2013.pdf



Annual TRI Cycle and Data Quality Process



- Facilities submit their TRI forms for each calendar year to EPA by July 1 of the following year
- The preliminary TRI dataset is released in July
- EPA conducts data quality checks and compliance assistance activities from July - October
- The TRI National Analysis (EPA's official annual TRI report) is published by January



TRI Preliminary Dataset

- Most recent TRI data available in July in Envirofacts and downloadable data files
- Dataset ~ 95% complete in July
- Opportunity to see most recent data prior to National Analysis publication
- Can be used to begin looking at facility-level data
- Dataset updated several times during summer and fall as EPA processes TRI submissions



TRI National Analysis

Toxics Release Inventory (TRI) Program[Contact Us](#)

TRI Home

Learn About TRI

TRI Information for You

TRI Data and Tools

Reporting for Facilities

TRI Chemicals

Laws and Rulemakings

Get Involved in TRI

Site Map

You are here: [EPA Home](#) » [Toxics Release Inventory \(TRI\) Program](#) » [2012 TRI National Analysis](#)

2012 TRI National Analysis

[español](#)

What is the TRI National Analysis?

Toxics Release Inventory National Analysis



2012 TRI Data Summary

Total disposal or other releases of toxic chemicals from TRI facilities decreased 12% from 2011 to 2012, mainly due to decreases in land disposal from metal mines.

Toxic chemical releases to air decreased 8% from 2011 to 2012, continuing a long-term trend driven mainly by decreases in acid gas releases from electric utilities. These decreases at electric utilities are mainly due to the installation of control technologies and a shift from coal to other fuels. Read the official 2012 TRI National Analysis press release.

2012 TRI National Analysis Overview

[Download the entire Overview Document or the following individual chapters \(PDF\):](#)



- Introduction: What is the TRI National Analysis?
- Disposal or Other Releases of TRI Chemicals
- Management of TRI Chemicals
- Industry Sector Profiles
 - Chemical Manufacturing
 - Electric Utilities
 - Metal Mining
 - Computer/Electronics
- Parent Companies
- Comparing TRI and Chemical Data Reporting



Key Messages for 2012 TRI National Analysis

- Total disposal or other releases of TRI chemicals decreased 12% from 2011-2012
 - Mainly due to decreases in land disposal from metal mines, but other industries also saw decreases including electric utilities and primary metals
 - Some industries saw increases including chemical manufacturing, hazardous waste management and paper
- Air releases decreased, continuing a long-term trend
 - Mainly due to decreases in acid gas releases from electric utilities
 - Data also show a decrease in mercury air releases from electric utilities
 - Decreases mainly due to a shift from burning coal to other fuels and the installation of control technologies at coal-fired power plants
- New this year:
 - Reporting on hydrogen sulfide
 - More local-level analyses
 - Comparing TRI data with data on manufacture/import and use of chemicals
 - Expansion of pollution prevention information

Key Messages for 2012 TRI National Analysis

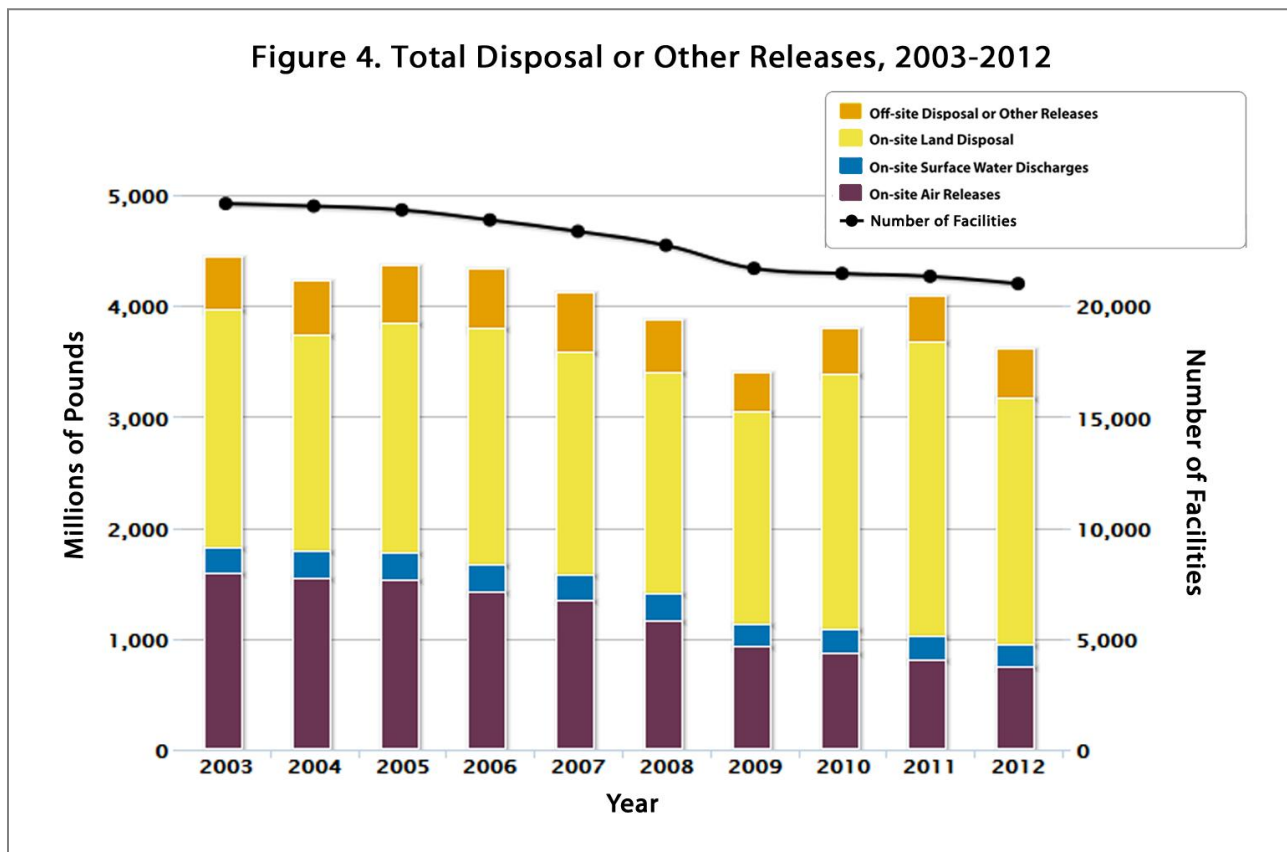


Figure from the 2012 TRI National Analysis Overview document



New This Year

- First year of TRI reporting on hydrogen sulfide
 - Added to the TRI chemical list in 1993.
 - An Administrative Stay in 1994 deferred reporting while EPA completed further evaluation of the chemical.
 - EPA lifted the stay in 2011.
 - 25.8 million pounds of hydrogen sulfide reported to TRI for 2012, mainly in the form of releases to air from paper, petroleum, and chemical manufacturing facilities

Figure 6. Hydrogen Sulfide Air Releases, 2012
20.3 million pounds

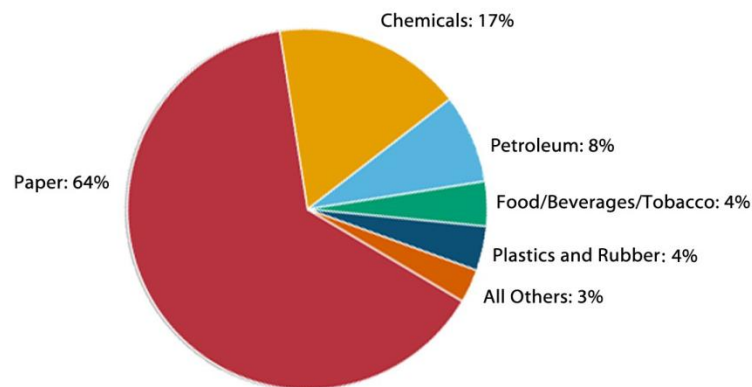
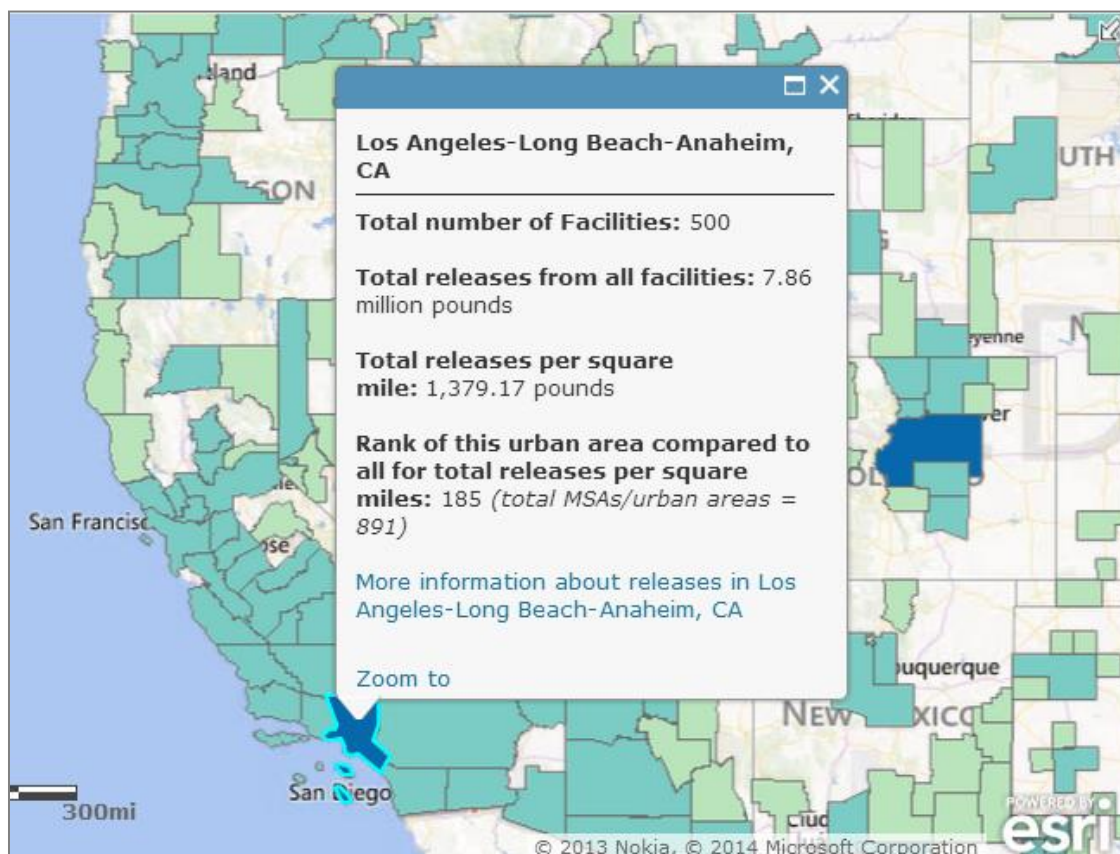


Figure from the 2012 TRI National Analysis Overview document

New This Year

- Expanded focus on communities via use of EPA's geo-platform
- TRI data analysis for each metropolitan and micropolitan area





New This Year

- Comparison of Chemical Data Reporting (CDR) data and TRI data
 - Provides a more complete picture of chemical manufacture/import and use
- Reporting on “green chemistry” source reduction activities
 - Facilities could give more detailed descriptions of steps taken to reduce pollution at the source by using new reporting codes
- Major expansion of TRI P2 Search Tool in Envirofacts
 - Can now graphically compare facilities within the same industry using a variety of environmental metrics
 - Easier than ever to track industry progress towards the goals of the Pollution Prevention Act and identify effective P2 practices



National Analysis Website

www.epa.gov/tri/NationalAnalysis



Using TRI Explorer

http://iaspub.epa.gov/triexplorer/tri_release.chemical

The screenshot displays the TRI Explorer web application interface. At the top, the EPA logo and navigation links are visible. The main heading is "TRI Explorer" with a breadcrumb trail: "You are here: EPA Home » TRI » TRI Explorer » Release Reports - Release Chemical Report". Below this is the "Release Reports" section with tabs for "State Fact Sheet", "Release Reports", "Waste Transfer Reports", and "Waste Quantity Reports". The "Release Reports" tab is active, showing sub-tabs for "Chemical", "Facility", "Federal Facility", "Trends", "Geography", and "Industry". The "Chemical" sub-tab is selected, leading to the "Release Chemical Report" page. A note indicates that the site uses pop-up windows. The page contains several filter sections: "Year of Data" (set to 2011), "Geographic Location" (set to All of United States), "Chemical" (set to All chemicals), "Industry" (set to All Industries), and "Data Set" (set to The default is the 2011 National Analysis data set). The "Report columns to include" section has three checked options: "Total On-site Disposal or Other Releases", "Total Off-site Disposal or Other Releases", and "Total On-and Off-site Disposal or Other Releases". Each option has a "Details" link and a list of sub-options.

TRI Explorer
United States Environmental Protection Agency
LEARN THE ISSUES | SCIENCE & TECHNOLOGY | LAWS & REGULATIONS | ABOUT EPA

TRI Explorer
You are here: EPA Home » TRI » TRI Explorer » Release Reports - Release Chemical Report

Release Reports

State Fact Sheet | Release Reports | Waste Transfer Reports | Waste Quantity Reports

Chemical | Facility | Federal Facility | Trends | Geography | Industry

Release Chemical Report

This site uses pop-up windows, click here for help on allowing pop-ups from this site

Year of Data
2011

Geographic Location
All of United States

Chemical
All chemicals

Industry
All Industries

Data Set
The default is the 2011 National Analysis data set (released November 2012)

Report columns to include

- ☒ **Total On-site Disposal or Other Releases**
Details
 - ☐ On-Site Disposal to Class I Wells, RCRA Subtitle C Landfills, and Other On-Site Landfills
 - ☐ Other On-Site Disposal or Other Releases
- ☒ **Total Off-site Disposal or Other Releases**
Details
 - ☐ Off-Site Disposal to Underground Injection Wells, RCRA Subtitle C Landfills, and Other Landfills
 - ☐ Other Off-Site Disposal or Other Releases
- ☒ **Total On-and Off-site Disposal or Other Releases**
Details
 - ☐ CAS Number



TRI Explorer

Five Steps to generate a report

Step 1. Choose Report Type

Step 2. Select a Report Grouping (How data will be summarized)

Step 3. Choose Filters (Optional - All filters have a default)

Step 4. Choose Columns to be displayed (All options have a default)

Step 5. Click on the Generate Report button.

TRI Explorer [Contact Us](#) [Share](#)

You are here: [EPA Home](#) » [TRI](#) » [TRI Explorer](#) » [Release Reports - Release Chemical Report](#)

Release Reports

[Fact Sheets](#) | [Release Reports](#) | [Waste Transfer Reports](#) | [Waste Quantity Reports](#)

[Chemical](#) | [Facility](#) | [Federal Facility](#) | [Trends](#) | [Geography](#) | [Industry](#) | [Dynamic Map](#)

Release Chemical Report [?](#)

This site uses pop-up windows, click here for help on allowing pop-ups from this site [Go To New Report](#)

Year of Data [?](#)

2012

Geographic Location [?](#)

All of United States

Chemical [?](#)

All chemicals

Industry [?](#)

All Industries

Data Set [?](#)

The default is 2012 National Analysis dataset (released to the public in November 2013)

Report columns to include [?](#)

☒ **Total On-site Disposal or Other Releases**
Details
☐ On-Site Disposal to Class I Wells, RCRA Subtitle C Landfills, and Other On-Site Landfills
☐ Other On-Site Disposal or Other Releases

☒ **Total Off-site Disposal or Other Releases**
Details
☐ Off-Site Disposal to Underground Injection Wells, RCRA Subtitle C Landfills, and Other Landfills
☐ Other Off-Site Disposal or Other Releases

☒ **Total On- and Off-site Disposal or Other Releases**
☐ CAS Number

Generate Report

TRI Explorer Links

- [TRI Explorer Guide](#)
- [Tutorial](#)
- [Explorer Update History](#)
- [Data Assumptions](#)

TRI Links

- Overview
- TRI Tools
 - [TRI Explorer](#)
 - [TRI Search](#)
 - [Form R Search](#)
 - [Form R & A Download](#)
 - [EZ Search](#)
 - [Customized Search](#)
 - [Pollution Prevention](#)
 - [Data Element Search Tool](#)
- TRI Guides
 - [TRI Explorer Guide](#)
 - [TRI Search Guide](#)
 - [Form R & A Download Guide](#)
 - [EZ Search Guide](#)
 - [Customized Search Guide](#)
 - [Pollution Prevention Guide](#)
 - [Operator Definition](#)

Red ovals identify available user aids or key references



TRI Explorer

You are here: [EPA Home](#) » [TRI](#) » [TRI Explorer](#) » Releases: Trends Report

[Contact Us](#) [Share](#)

Releases: Trends Report [i](#)

Data Source: 2012 National Analysis dataset (released to the public in November 2013)

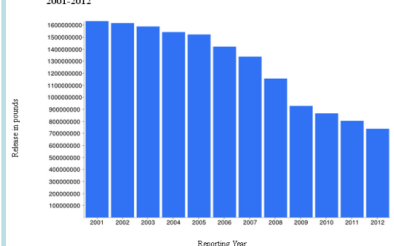
[See Note](#) [Go To New Report](#) [Instructions for printing wide](#)

TRI On-site and Off-site Reported Disposed of or Otherwise Released (in pounds). Trend Report for facilities in All industries, for 2001 Core Chemicals, U.S. 2001-2012

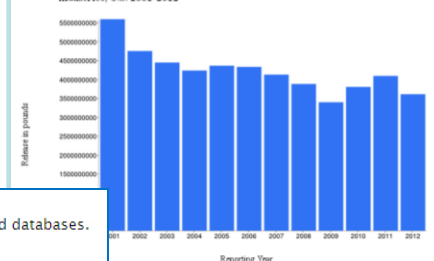
Are year to year changes comparable?

Row #	Year	Total Air Emissions i	Surface Water Discharges i	Total Underground Injection i	Total On-site Releases to Land i	Total On-site Disposal or Other Releases i	Total Off-site Disposal or Other Releases i	Total On- and Off-site Disposal or Other Releases i
1	2001	1,630,115,151	243,228,360	215,649,594	2,999,376,362	5,089,069,467	497,013,787	5,586,083,254
2	2002	1,614,915,645	243,354,729	227,038,336	2,175,522,592	4,260,901,302	484,267,877	4,745,169,179
3	2003	1,586,721,772	230,831,024	229,183,906	1,912,853,326	3,959,589,028	482,464,416	4,442,053,444
4	2004	1,540,124,113	253,284,966	238,165,383	1,701,451,539	3,733,026,001	498,451,770	4,231,477,771
5	2005	1,520,004,513	254,613,500	235,775,608	1,830,013,286	3,840,406,898	518,812,681	4,359,219,579
6	2006	1,418,942,831	250,560,076	224,179,677	1,906,216,904	3,799,899,495	527,072,865	4,326,972,361
7	2007	1,336,176,483	239,048,844	189,028,253	1,810,001,335	3,574,254,915	549,519,444	4,123,774,359
8	2008	1,153,790,791	246,501,637	174,173,758	1,814,623,519	3,389,089,705	486,557,233	3,875,646,938
9	2009	926,564,166	204,909,929	155,241,470	1,749,694,096	3,036,409,661	356,923,473	3,393,333,134
10	2010	864,668,769	222,798,501	202,023,167	2,097,489,364	3,386,979,800	411,284,632	3,798,264,432
11	2011	802,381,040	213,248,967	195,907,336	2,464,148,951	3,675,686,293	413,368,226	4,089,054,519
12	2012	736,578,704	206,738,322	198,232,188	2,024,727,431	3,166,276,644	439,360,261	3,605,636,905

TRI On-site Total Air Emissions Reported (in pounds), All industries, U.S. 2001-2012



TRI Total On- and Off-site Disposal or Other Releases Reported (in pounds), All industries, U.S. 2001-2012



Export this report to a text file [i](#)

Create comma-separated values, compatible with spreadsheet and databases.

☒ Save data in comma-separated-value, CSV, file ☐ Send data into Microsoft Excel
[Download](#) all records

View other report type:

[Transfers Off-site for Further Waste Management](#)
[Quantities of TRI Chemicals in Waste \(waste management\)](#)

View report in other formats:

☐ PDF (Acrobat Reader); or
☐ RTF (Microsoft Word)

Note: The above trend report excludes quantities for hydrogen sulfide added in 2012 and additional PACs added in 2011. Total quantities reported to TRI may be viewed in any report aggregated for a single year



Questions and Discussion