



#### Introduction to the Toxics Release Inventory and the 2013 TRI National Analysis Report

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aws and Rulemakings	Tens of thousands of chemicals are used by industries and Download the Report
et Involved in TRI	businesses in the United States to make the products on which our
RI Contacts	society depends, such as pharmaceuticals, clothing, and  - <u>Full 2013 IRI National</u> Analysis Analysis
ite Map	products are toxic, and while the majority of toxic chemicals are  • Executive Summary
	managed so that they are not released into the environment, some
	releases of toxic chemicals are inevitable. Other Resources
	It is your right to know what toxic chemicals are being used in your community, how they are being disposed of or otherwise managed, and whether their releases to the environment are increasing or decreasing over time. The Toxics Release Inventory (TRI) is an EPA program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. This information is submitted by thousands of U.S. facilities on over <u>650</u> chemicals and chemical categories under the <u>Emergency Planning</u> and <u>Community Right-to-Know Act (EPCRA)</u> and the <u>Pollution</u>

# TO BOTTED STATES

## **Overview**

- Introduction to TRI
- Reporting Year 2013 TRI National Analysis
- New interactive web-based format
- Using TRI Explorer to analyze TRI data
- Questions & Discussion



#### Why was the Toxics Release Inventory created?



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

#### 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

#### 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 waste 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:



• 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: http://www.epa.gov/tri/triprogram/FactorsToConPDF.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





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



#### 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
- Other waste management:
  - Recycling
  - Treatment
  - Energy Recovery
- Pollution prevention activities (<u>www.epa.gov/tri/p2</u>)









## **Considerations When Using TRI**

- TRI covers an important subset of toxic chemicals managed at U.S. facilities, but doesn't cover all chemicals or facilities
- Data reflect annual totals and don't indicate the frequency or duration of a release
- 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 with requirements designed to limit human and environmental harm

For more information, see *"Factors to Consider When Using TRI Data"* at: <u>http://www.epa.gov/tri/triprogram/FactorsToConPDF.pdf</u>



#### Annual TRI Cycle and Data Quality Process



- Facilities submit their TRI forms for each calendar year to EPA by July 1<sup>st</sup> 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 in 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 late TRI submissions and revisions, and performs data quality checks



#### **TRI National Analysis**

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Laws and Rulemaking Get Involved in TRI TRI Contacts	s Tens of thousan businesses in th society depends automobiles. M	Tens of thousands of chemicals are used by industries and businesses in the United States to make the products on which our society depends, such as pharmaceuticals, clothing, and automobiles. Many of the chemicals needed to create these       Download the Report         • Full 2013 TRI National Analysis       Analysis				ort		
Site Map	It is your right to community, how and whether the	managed so that they are not released into the environment, some releases of toxic chemicals are inevitable.       Other Resources         It is your right to know what toxic chemicals are being used in your community, how they are being disposed of or otherwise managed, and whether their releases to the environment are increasing or (Excel)       Supporting data files for the National Analysis (Excel)						
	decreasing over program that tr may pose a thr information is s <u>chemicals and o</u> and <u>Community</u> <u>Prevention Act</u>	time. The Toxics Releases acks the management eat to human health a ubmitted by thousand themical categories un right-to-Know Act (E (PPA).	ease Inventory (TF of certain toxic cl nd the environmen s of U.S. facilities ider the <u>Emergenc</u> (PCRA) and the <u>Po</u>	RI) is an EPA hemicals that nt. This on over <u>650</u> <u>y Planning</u> <u>llution</u>	TRI Nati Briefing     TRI Nati Question	onal Analysis Slides onal Analysis ns and Answers	5	



#### Key Messages for 2013 TRI National Analysis

- Total production-related waste managed increased 4% from 2012-2013
  - Of the 26 billion lbs of waste managed, 22 billion lbs (84%) were not released due to preferred waste management practices (e.g. recycling)
  - Reporting on all preferred waste management activities increased
- Total disposal or other releases increased 15% from 2012-2013
  - Of the 4 billion lbs released to the environment, 66% went to land, 19% went to air, 10% was transferred off-site, and 5% went to surface water
  - Land disposal increased 24%, primarily due to metal mining
- Air releases increased 1%, reversing a long-term trend
  - Mainly due to increased releases from the electric utility and chemical manufacturing sectors
- New this year:
  - Transition to a web-based format from PDF report
  - Expanded local analyses using interactive maps
  - More pollution prevention (P2) information, including parent co. data
  - Expanded analyses on water pollution information, greenhouse gas
  - emissions, and emergency planning and chemical safety information



#### **Key Messages for 2013 TRI National Analysis**





#### **Key Messages for 2013 TRI National Analysis**





- Expanded focus on communities
  - TRI analysis available at a local level through interactive maps
  - Users can see TRI data and print fact sheets for each state, county, city, ZIP code, US metropolitan and micropolitan area, and major watersheds



View Larger Map, Click on any one of the metropolitan areas in the map to see detailed information.

- Greenhouse Gas Reporting
  - New map of projected sea level rise and TRI facility locations
  - Compares TRI data with GHG Reporting Program data





- Discharge Monitoring Report Data and TRI
  - Information on toxic chemicals released to water reported to both TRI and DMR
  - Information on conventional water pollutants and on facilities not included in TRI





- Expanded pollution prevention (P2) information
  - Includes P2 reporting by Parent Companies, new information on wastewater treatment methods, and highlighted P2 activities for sectors and chemicals with the greatest reductions in releases



- More information on off-site transfers
  - State-specific information on off-site transfers for disposal
  - Information on main sources of transfers to each state
  - List of top 5 chemicals transferred into each state
- New analysis of pollution rates by fuel type
  - Combines data from TRI, GHG Reporting Program, and DOE's Energy Information Administration
- New analysis of Emergency Planning and Chemical Safety data
  - Information on chemical safety and accident preparedness
  - Overview of programs that aim to reduce chemical risks at the community level



#### **National Analysis Website**

#### www.epa.gov/tri/NationalAnalysis

#### 2013 TRI National Analysis: Pollution Prevention & Waste Management



The Toxics Release Inventory (TRI) is a starting point for communities to learn about toxic chemicals that industrial facilities are releasing into the environment or managing as waste, whether on- or off-site. The information that facilities report to TRI annually includes the quantities of toxic chemicals that are disposed or otherwise released, recycled, combusted for energy recovery, and treated for destruction. This waste is referred to as "productionrelated waste" because it does not include wastes that are the result of non-production related events such as site remediation.

Looking at productionrelated waste managed over time helps track progress in reducing waste generation and in moving towards safer waste management methods. For example, EPA encourages facilities to first





- 3. <u>Source</u> <u>Reduction/Pollution</u> Prevention
- 4. <u>Waste Management by</u> Parent Company

Download a PDF of this chapter Download a CSV file of the data in this chapter



## **Upcoming TRI P2 Tool Webinar**

Do you want to know what companies are doing to reduce their environmental footprint in the U.S.?

Visit <u>www.epa.gov/tri/p2</u> to register for our Feb 4<sup>th</sup> webinar on corporate sustainability and the expanded TRI P2 Tool







## **Using TRI Explorer**

#### http://iaspub.epa.gov/triexplorer/tri\_release.chemical

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         Fact Sheets       Release Reports         Waste Transfer Reports								
Chemical   Facility Release Chemical Report : This site uses pop-up windows, click here for help or Year of Data : 2013 Geographic Location : All of United States Chemical : All chemicals Industry : All industries Data Set : The default is 2013 National Analysis dataset (release October 2014) Updated Nov 24, 2014) Select 2012 TRI Dataset (released March 2014) Select 2012 Vational Analysis dataset (released to the public in November 2013) Generate Report	Federal Facility I Federal Facility n allowing pop-ups from this s Report columns to in I Total On-site Dispos C Landfills, and Ot On-Site Dispos C Landfills, and Ot Other On-Site Dispos C Landfills, and Ot Other On-Site Dispos Set dispose I Total Off-Site Dispos etails Off-Site Dispos etails Off-Site Dispos Other Off-Site Dispos etails Other Off-Site Dispos C Landfills, and Ot Other Off-Site Dispos etails C Total Off-Site Dispos etails C Total On-and Off-site P Total On-and Off-site C AS Number	Trends ite clude (1) osal or Other IP al to Class I Wells; her On-Site Land bisposal or Other I osal or Other I al to Undergroun e C Landfills, and bisposal or Other ite Disposal or	Release Release fills Releas Releas d Inject I Other Other	Geography New Report 25 Subtitle es es tion Landfills es r	1	Industry		



## **TRI Explorer**

#### Five Steps to generate a report

	<b>Step 1.</b> Choose <i>Report Type</i>	TRI Explorer         You are here: EPA Home » TRI » TRI Explorer » Release Reports – Release Chemical Report         Release Reports         Release Reports         Fact Sheets         Release Reports         Waste Transfer Reports         Waste Quantity Reports	⊠Contact Us 🐼 Share
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3 2003	1,586,697,967	230,831,052	229,183,906	1.912.950.084	3,959,663,010	482 433 101	4,442,096,111
4 2004	1,540.087,654	253,334,147	238,165,383	1,701,664,176	3,733,251,360	498,263,933	4,231,515,300
5 2005	1,519,961,421	54,656,818	235,775,608	1,829,895,117	3,840,288,964	518,574,435	5 4,358,863,399
6 2006	1,418,805,486	2, 7, 595, 588	224,179,677	1,906,538,500	3,800,119,251	526,739,226	4,326,858,477
7 2007	1,336,066,196	239,063,508	193,642,417	1,811,468,042	3,580,240,163	548,898,993	4,129,139,156
8 2008	1,154,393,594	247,1 3,502	178,333,501	1,820,089,591	3,399,920,189	485,549,442	2 3,885,469,631
9 2009	925,175,904	206,11,098	157,497,262	1,751,390,178	3,040,176,443	358,234,218	3,398,410,661
10 2010	861,979,958	230,569,145	204,825,510	2,111,119,477	3,408,494,490	411,491,272	2 3,819,985,762
11 2011	804,256,424	220,290,86	196,689,695	2,468,813,101	3,690,050,085	413,420,591	4.103.470.676
12 2012	740,483,307	215,607,270	198,052,224	2,026,538,680	3,180,681,481	409,132,165	3,589,813,646
13 2013	750,534,270	211,590,696	201,686,840	2,548,184,968	3,711,996,775	405,372,591	4,117,369,366
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## **Questions and Discussion**