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
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!
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

**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
- The passage of the Emergency Planning and Community Right-to-Know Act (EPCRA) in 1986 was part of the United States response
Why is TRI important?

TRI can help:

• Identify how many TRI facilities operate in an area and where they are located.
• Identify which chemicals are being released by TRI facilities.
• Track increases or reductions of toxic chemical releases from facilities over time.
• Compare the toxic chemical releases and pollution prevention efforts of facilities in one location with similar facilities across the country.
• Facilities identify opportunities to reduce pollution.

Find more information about how TRI data can be used at:
www2.epa.gov/toxics-release-inventory-tri-program/tri-data-uses
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/toxics-release-inventory-tri-program/factors-consider-when-using-toxics-release-inventory-data
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/toxics-release-inventory-tri-program/factors-consider-when-using-toxics-release-inventory-data
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 ~ 98% 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

2012 TRI National Analysis

What is the TRI 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 disposal of 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 4. Total Disposal or Other Releases, 2003-2012

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
  – [www.epa.gov/enviro/facts/tri/p2.html](http://www.epa.gov/enviro/facts/tri/p2.html)
National Analysis Website

www.epa.gov/tri/NationalAnalysis
Using TRI Explorer

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

Red ovals identify available user aids or key references.
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