



2017 International Emissions Inventory Conference Training

Toxic Release Inventory (TRI)

The Quality Behind the Numbers and Helping You Get to the Numbers

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USEPA

Office of Chemical Safety and Pollution Prevention
Toxics release Inventory Program



Agenda for Today

- TRI Overview
- The Data Quality Process
- TRI and CAER (Combined Air Emissions Reporting)
- Q & A
 - Break – 15 minutes
- Overview – Data Access / Analysis tools
- Demos on How to Run Specific Queries
- Additional Questions / Discussions / Demonstrations



TRI Overview

Topic Instructor:
Steve Witkin

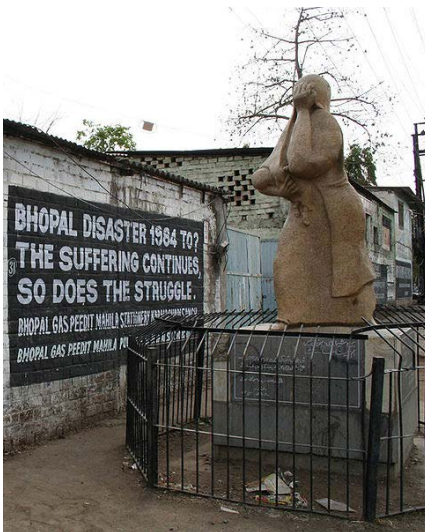
Why was the Toxics Release Inventory created?

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



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

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:



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:
<https://www.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**



TRI-covered industries

- Identified by NAICS
 - 212 Mining
 - 221 Utilities
 - 31 - 33 Manufacturing
 - All Other Miscellaneous Manufacturing (includes 1119, 1131, 2111, 4883, 5417, 8114)
 - 424 Merchant Wholesalers, Non-durable Goods
 - 425 Wholesale Electronic Markets and Agents Brokers
 - 511, 512, 519 Publishing
 - 562 Hazardous Waste
 - Federal Facilities

Exceptions / conditions exist across all industries

Full list available from most secondary web pages off of www.epa.gov/tri, in left hand side bar is a link to "Covered Industries



Ten full-time employees equivalents

- 20,000 Total employments hours per year
- Includes paid holidays, vacations and sick leave
- Includes full time, part time and contract staff



TRI Listed Chemical

- 692 Chemicals and chemical categories
 - 595 individually-listed chemicals and
 - 32 chemical categories
 - Five categories containing 70 specifically-listed chemicals).
 - 13 chemical / chemical categories have qualifiers

Full list available from most secondary web pages off of www.epa.gov/tri, in left hand side



Chemical / chemical categories with qualifiers

- Qualifiers based on form
 - Aluminum 7429-90-5
 - Aluminum oxide 1344-28-1
 - Ammonia 7664-41-7
 - Asbestos 1332-21-4
 - Hydrochloric acid 7647-01-0
 - Nitrate compounds NA
 - Phosphorus 7723-14-0
 - Sulfuric acid 7664-93-9
 - Vanadium 7440-62-2
 - Zinc 7440-66-6
- Qualifiers based on activity
 - Dioxin and dioxin-like compounds
 - Isopropyl alcohol 67-63-0
 - Saccharin 81-07-2



Chemical Activity Threshold

- For toxic chemicals that are NOT PBT chemicals the threshold amounts are:
 - 25,000 pounds for manufacture or
 - 25,000 pounds for process or
 - 10,000 pounds for otherwise use
- PBT thresholds do not vary by activity, but do vary by specific chemical
 - 100 lbs, 10 lbs, 0.1 grams (Dioxins)



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 (www.epa.gov/tri/p2)





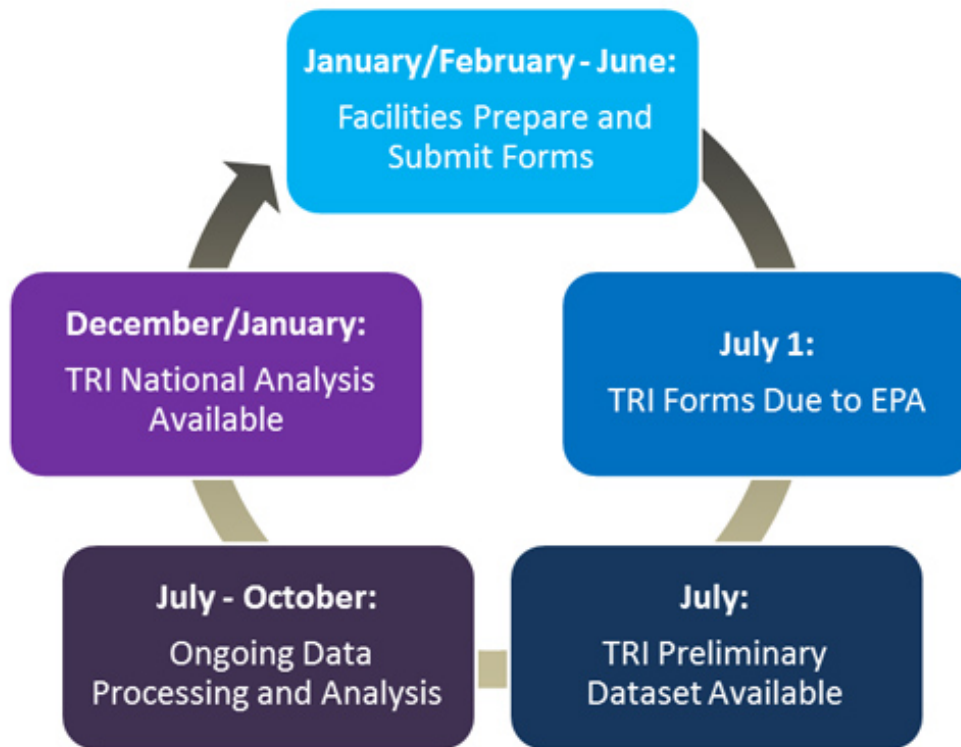
Considerations When Using TRI

- 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:
<https://www.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 1st 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 Datasets

- Preliminary Dataset
 - First release in July
 - Only in Envirofacts and downloadable data files
 - Dataset ~ 95% complete in July
 - Dataset updated several times during summer and fall
- National Analysis Data Set
 - Typically releases in October
 - Complete dataset
- ‘Spring’ Update
 - Typically released in March
 - Incorporates any revisions since NA dataset



Recent TRI Developments

- 1-Bromopropane
 - Added to TRI chemical list in November 2015.
 - Data will be included starting with RY 2016
- Hexabromocyclododecane (HBCD) category
 - Added to TRI chemical list in November 2015.
 - Data will be included starting with RY 2017
- Natural gas processing plants
 - Proposed rule to add was moved from active to inactive in the Unified Agenda



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Resources

- Toxics Release Inventory Program: <http://epa.gov/tri/>
- Using TRI Data and Tools: <http://www.epa.gov/tri/tridata/index.html>
- TRI-Listed Chemicals Home Page:
 - [2016 TRI Chemical List \(pdf\)](#)
 - [2016 TRI Chemical List \(Excel\)](#)
 - [2017 TRI Chemical List \(Excel\)](#)
- TRI Industry List
- TRI GuideME – Searchable TRI guidance document, Q & As, and Reporting Forms and Instructions (RFI)