Tapping into Toxics with EPA's TRI data on facilities' waste

Presented by Abby Burton

ERG on behalf of EPA Region 9

March 22, 2023

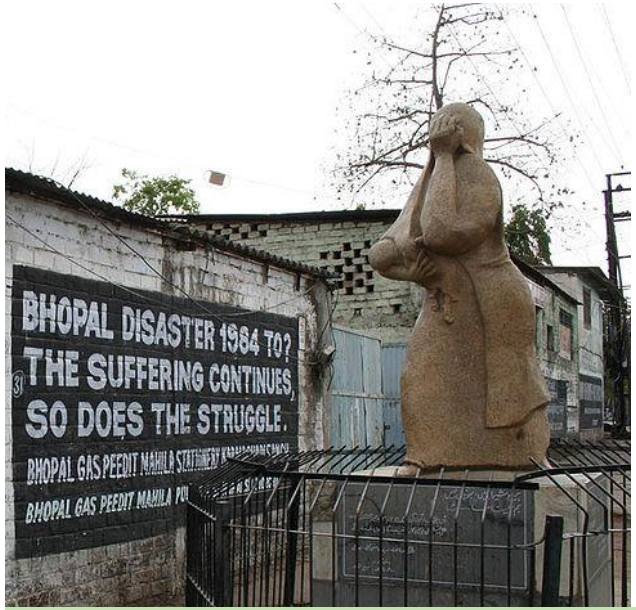
Presentation Overview

- How TRI can help you
- Background and History
- Which Facilities Report to TRI
- Using TRI to understand facility operations
- Tools and Resources
- Demo of TRI Tools

Why is TRI relevant to my work?

- TRI data provide information about facility activities
  - TRI provides data on facility operations and chemicals handled
- TRI data can be used for targeting

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 accidentally released from a facility. Thousands died.
- **Institute, West Virginia** August 1985
  - Chemical release at a similar facility in the U.S.
- Increased concern in the U.S. about chemical accident preparedness and availability of information on chemicals used in industrial facilities
- In 1986, **Emergency Planning and Community Right-to-Know Act (EPCRA)**. Section 313 established the Toxics Release Inventory.

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What is TRI?

- TRI is a public database of the quantities of toxic chemicals that are released and managed as waste in the U.S. each year. TRI includes information on:

Releases

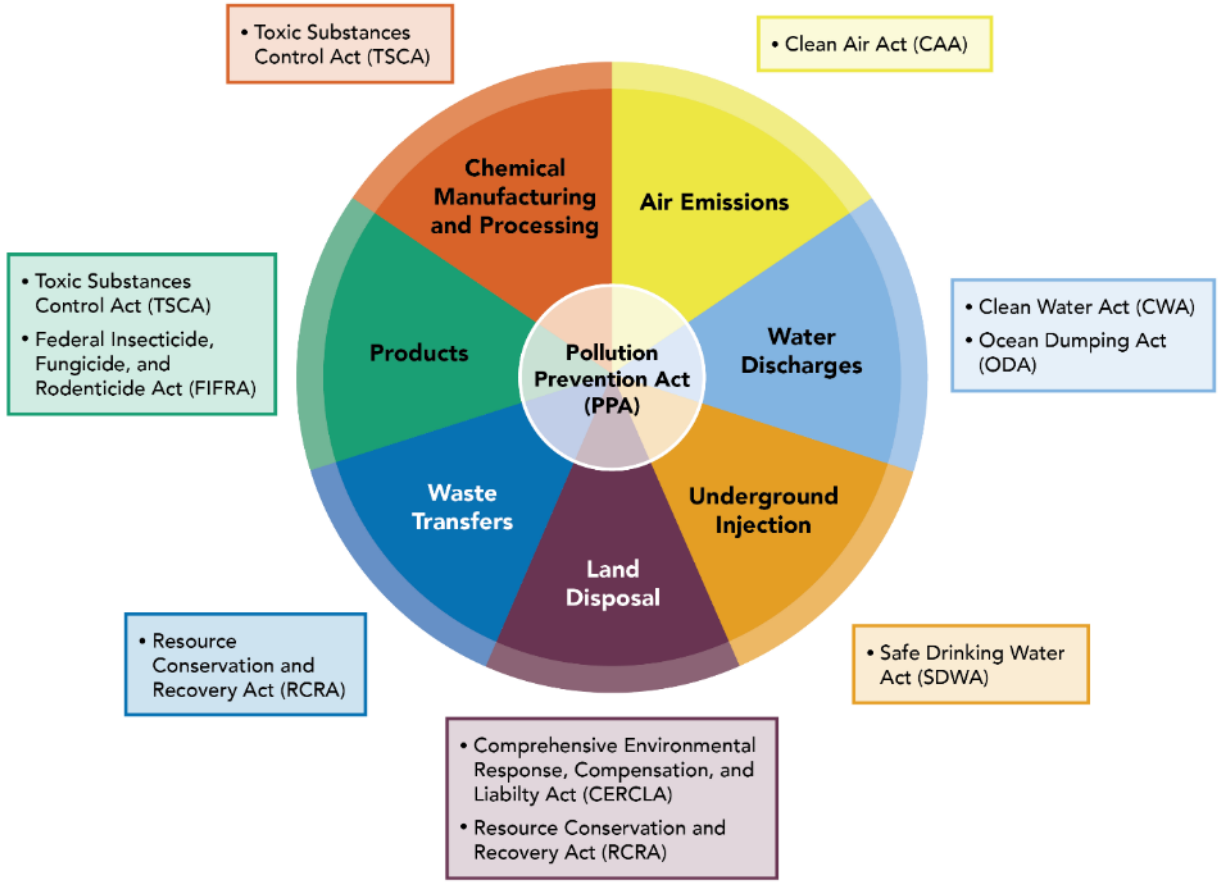
Waste transfers

Recycling & Treatment

Pollution prevention

- **TRI is chemical-specific**

How does TRI fit in to EPA programs?



Which facilities must report to TRI?

- Facility must be in a TRI-covered industry sector, including:

Manufacturing

Coal/Oil Electricity Generation

Certain Mining Facilities

Hazardous Waste Management

Federal Facilities

Additional Requirements

- Facility must have the equivalent of at least 10 full-time employees.
- Facility must manufacture, process or use more than a certain amount of a TRI-listed toxic chemical per year.

Chemical Thresholds

A facility meeting the first two applicability criteria for reporting must file a TRI Report for TRI-listed chemical* if the facility:

THRESHOLDS

Manufactured (including imported)
more than *25,000* pounds of the chemical in the reporting year

OR

Processed
more than *25,000* pounds of the chemical in the reporting year

OR

Otherwise Used
more than *10,000* pounds of the chemical in the reporting year

*These thresholds apply to most of the 800+ TRI-listed chemicals but do not apply to the Chemicals of Special Concern or to PFAS.

TRI Chemicals and Chemical Categories

- TRI is *chemical-specific*
- Current list contains over 800 individual chemicals and chemical categories. Listed chemicals include:
  - **Individual chemicals**
  - **Chemical categories**
  - **PFAS**
- Section 313 chemical list and more information available at:

https://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals

Exemptions

- TRI regulations **provide exemptions** for specific scenarios.
- Exemptions allow for a facility to **not consider quantities** of toxic chemicals in certain circumstances

- **Articles**
- ***De Minimis***
- Coal Extraction
- Intake Air and Water
- Laboratory Activities
- Janitorial or Facility Grounds Maintenance
- Metal Mining Overburden
- Motor Vehicle Maintenance
- Operators of Establishments on Leased Property
- Owners of Leased Property
- Personal Use
- Structural Component of the Facility

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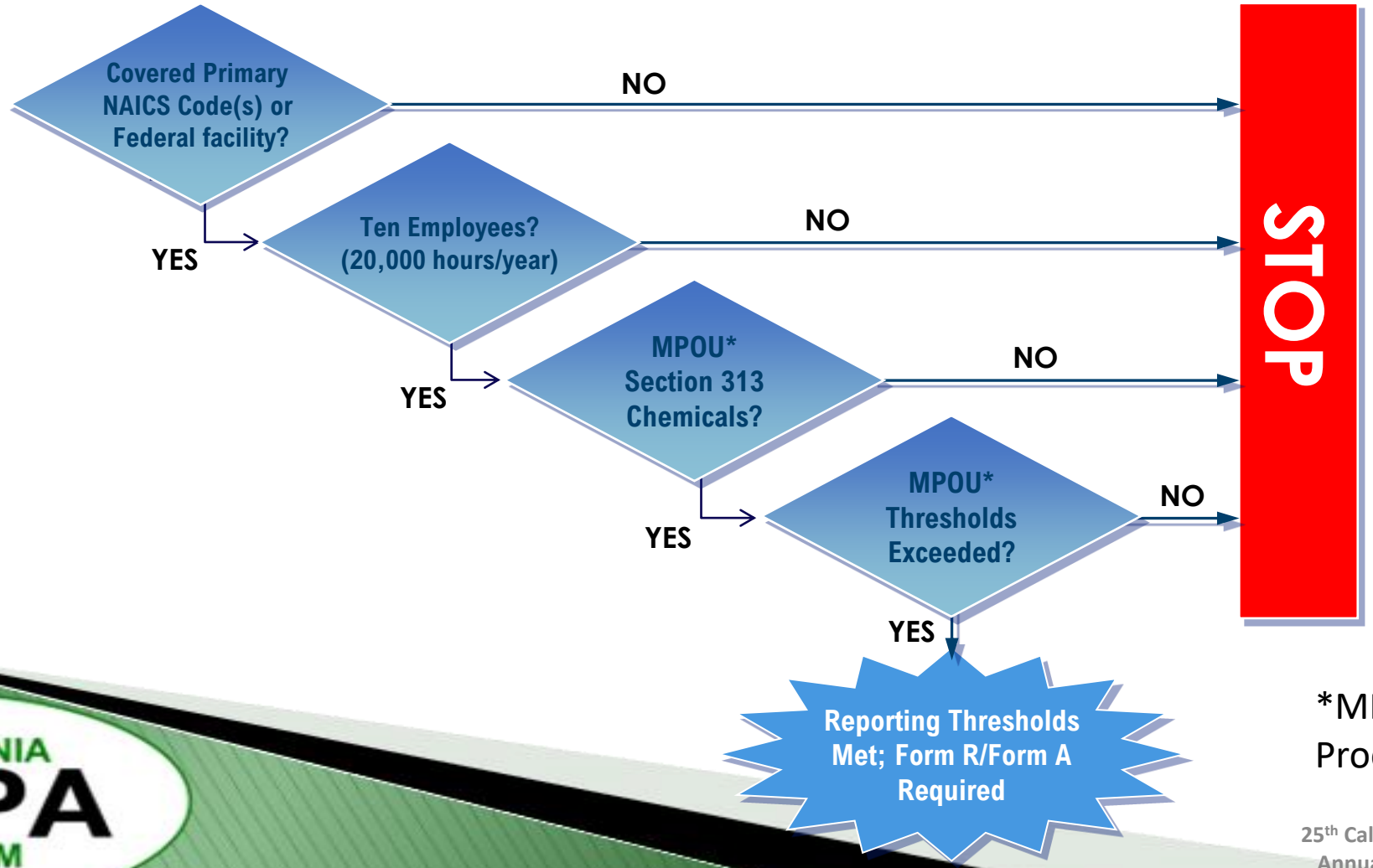
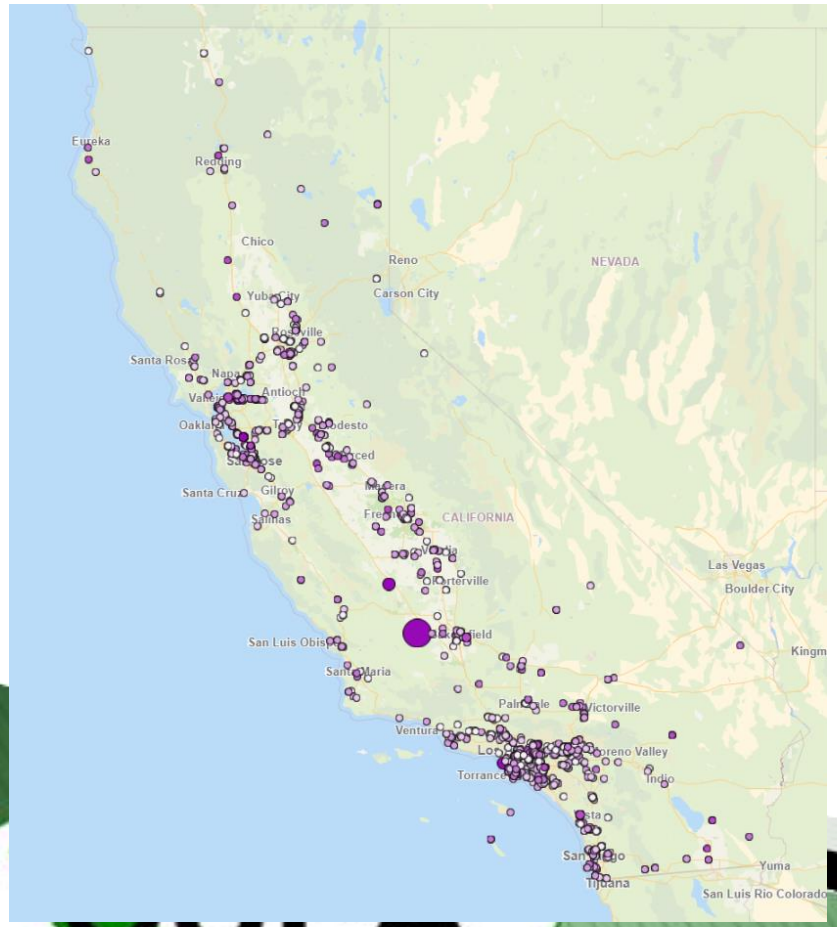
TRI Reporting Requirements Summary



*MPOU = Manufacture, Process, or Otherwise Use

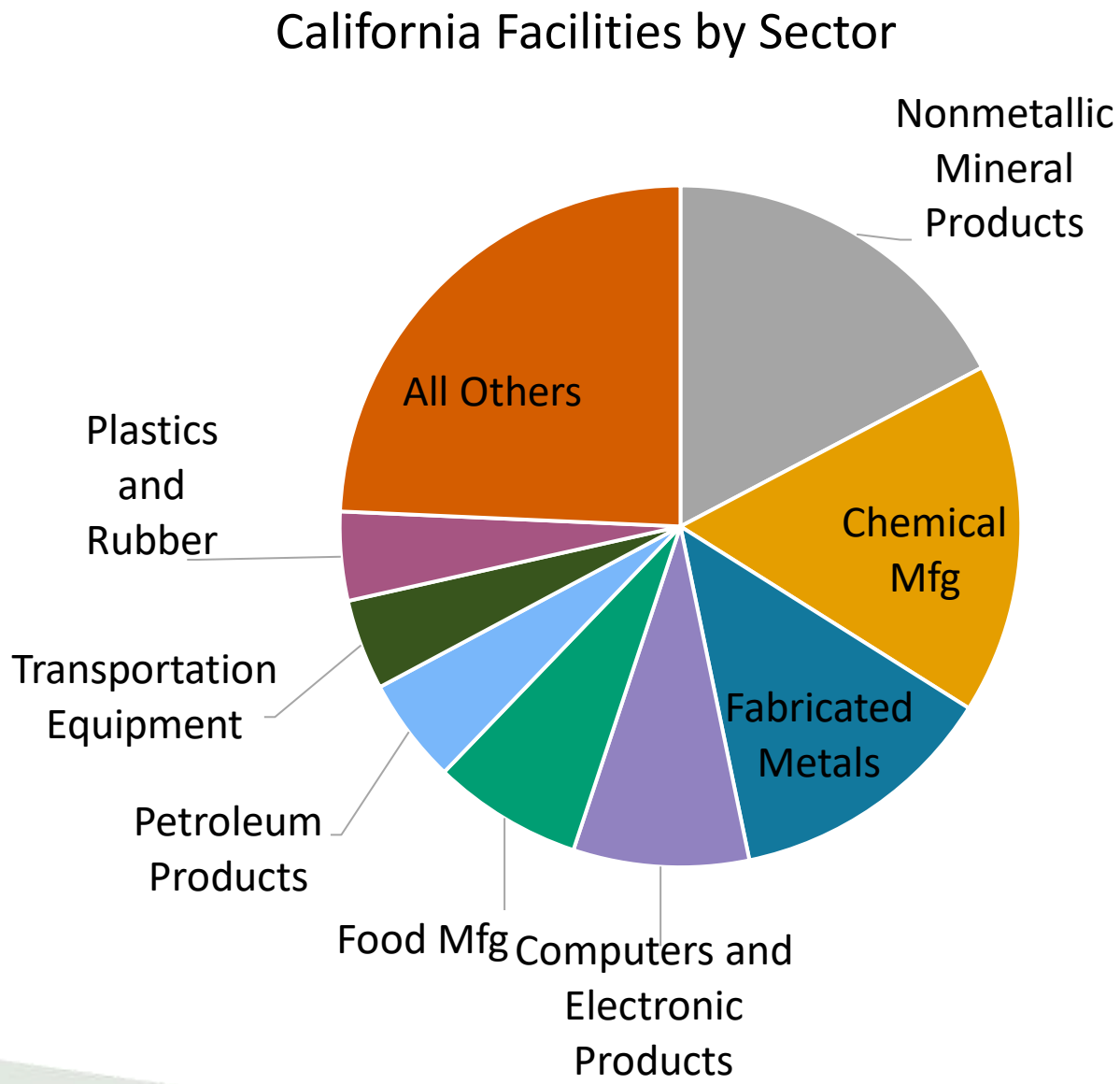
TRI Reporting



- TRI includes data from ~20,000 facilities and covers more than 800 toxic chemicals and chemical categories
  - >1,000 facilities in California
- TRI forms must be submitted by July 1st each year
  - July 1, 2023 deadline for January 1 - December 31, 2022 activities

California Quick Facts

- 1,000+ facilities, 180+ chemicals
- Top sectors for releases and waste:
  - Petroleum Products (refineries)
  - Hazardous Waste (TSDFs)
  - Chemical Manufacturing
  - Primary Metals
  - Food Manufacturing



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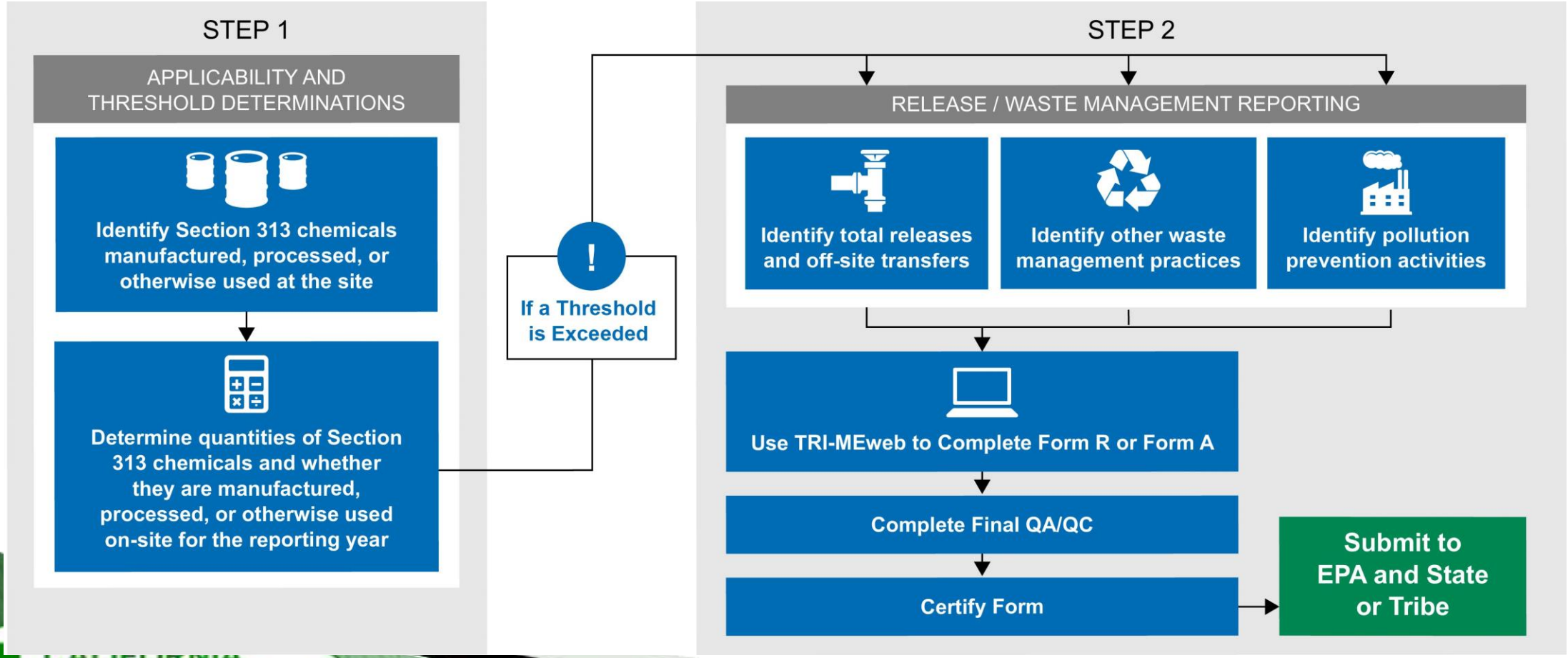
TRI Reporting – 2 Part Process



The TRI Data – Key points

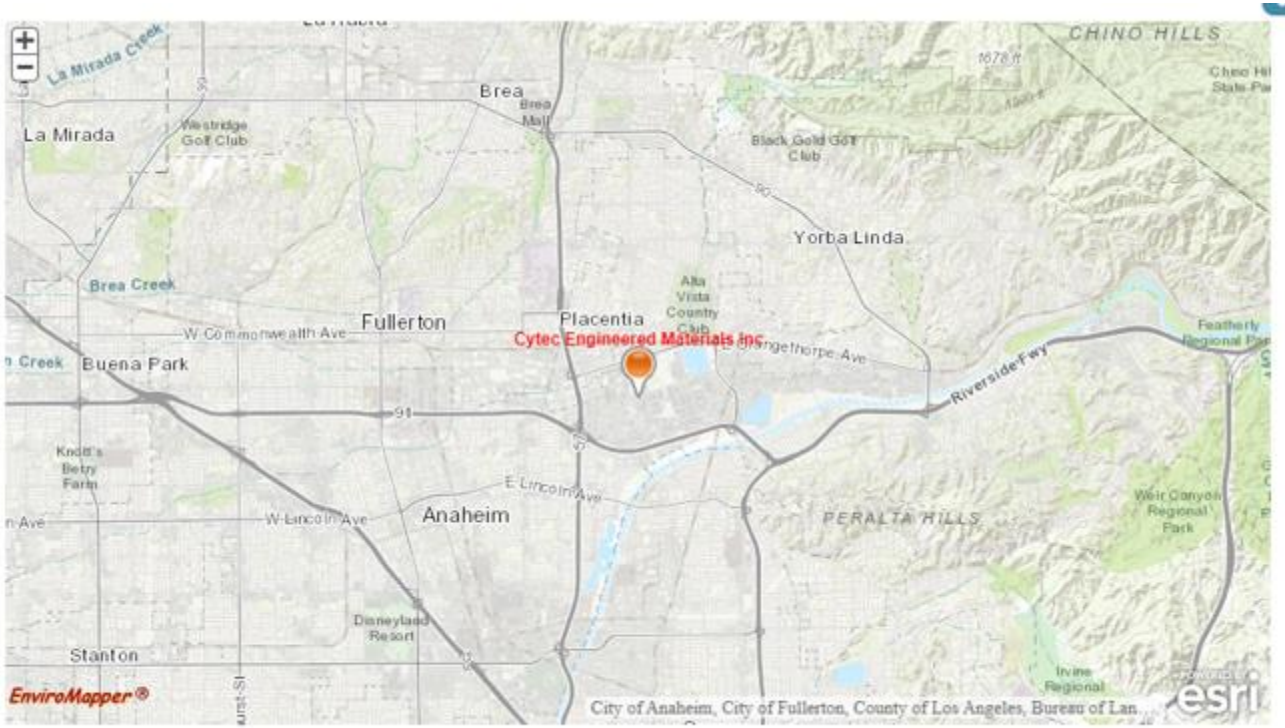
- TRI release data is independent of compliance with other laws
- Data is limited to certain facilities and certain chemicals
- Reporting zero releases is possible
  - Reporting is triggered based on what is used, not what's released

What data are reported?

Facility Information

- Facility name, address, etc.
- Parent Company
- Public Contact
- Sector

Facility Name	CYTEC SOLVAY COMPOSITE MATERIALS ANAHEIM	**TRI ID**	92806BSFST1440N
Address	1440 N KRAEMER BLVD ANAHEIM, CA, 92806	**FRS ID**	110000480952
Mailing Name	CYTEC SOLVAY COMPOSITE MATERIALS ANAHEIM	**DUNS Number**	874748937
Mailing Address	1440 N KRAEMER BLVD ANAHEIM, CA, 92806	**Parent Company**	SOLVAY HOLDING INC
County	ORANGE	**Public Contact**	JESSICA V.
EPA Region	9	**Phone**	(657) 253-
Latitude	33.86194	**Tribe**	NA
Longitude	-117.86123	**BIA Tribal Code**	NA
NAIC(S)	325520 Adhesive Manufacturing	**Industry Sector**	325 Chemicals
Last Form	2021		



*You can navigate within the map with your mouse

Form R Content (Chemical-specific)

- On-site releases of TRI chemicals to **Air, Water, Land**
- On-site waste management: **Treatment, Recycling, Energy Recovery**
- Transfer of chemical waste to off-site locations

Uses of the Chemical at the Facility

Section 3. Activities and Uses of the Toxic Chemical

3.1 Manufacture the Toxic Chemical:

Produce: YES	Import: NO	On-Site Use/Processing: NO
Sale/Distribution: NO	Byproduct: YES	Impurity: NO

3.2 Process the Toxic Chemical:

Reactant:	NO
Formulation Component:	NO
Article Component:	NO
Repackaging:	NO
Impurity:	NO
Recycling:	NO

3.3 Otherwise Use the Toxic Chemical:

Chemical Processing Aid:	NO
Manufacturing Aid:	NO
Ancillary or Other Use:	YES

Sub-Uses:

Z306	Waste treatment

Maximum On-Site Amount (Section 4)

WEIGHT RANGE IN POUNDS		
Range Code	**From**	**To**
01	0	99
02	100	999
03	1,000	9,999
04	10,000	99,999
05	100,000	999,999
06	1,000,000	9,999,999
07	10,000,000	49,999,999
08	50,000,000	99,999,999
09	100,000,000	499,999,999
10	500,000,000	999,999,999
11	1 billion	More than 1 billion

- Range codes indicating the maximum quantity on-site during the reporting year
- Maximum total (non-exempt) amount present at one time during reporting year
- **Based on amount in storage, process, and wastes**
- **Maximum amount on site may differ from the Tier II (HMBP)-reported maximum amount on site value**
    - *HMBP is usually by mixtures, Form R is chemical-specific*
    - *Form R includes all forms of the chemical on site (raw materials, products, wastes)*

Air and Water Releases

- Facilities use best available information
  - Monitoring is **not** required for TRI reporting
  - Facilities report stack and fugitive air emissions, surface water discharges, and transfers to POTWs

Disposal to Land On-Site

- Includes releases to:
  - Landfills (RCRA C and other)
  - Surface Impoundments (RCRA C and other)
  - Land Treatment/Application Farming
  - Other land disposal
  - Underground injection

Other Off-site Transfers

- Transfers to other off-site locations (Section 6.2)
  - **Includes name, address, and RCRA ID of the receiving facility**
  - **Codes identify activity (waste treatment, disposal, recycling, and energy recovery)**
- Facilities may refer to RCRA records

On-Site Waste Management

- **Waste Treatment**
- **Energy Recovery**
- **Recycling Methods**

Waste Treatment Methods and Efficiency

- Facilities report each waste treatment method that each waste stream containing the chemical undergoes
  - **Included even if method has no effect on the chemical**
  - **Efficiency of the waste treatment methods at eliminating the chemical from the waste stream**
  - **Includes destruction or physical removal**
- Quantity treated on-site (**destruction only**)

Energy Recovery

- Facility reports quantity and process
- Chemical must be combustible and have a significant heating value (>5,000 BTU/lb.)
- Combustion unit is integrated into an energy recovery system (e.g., industrial furnace, industrial kiln, or boiler)

Section 7B. On-Site Energy Recovery Processes

ON SITE ENERGY RECOVERY PROCESSES
U02 - INDUSTRIAL FURNACE

Energy Recovery Codes

U01 Industrial Kiln

U02 Industrial Furnace

U03 Industrial Boiler

Recycling

- Facility reports quantity and methods used
  - **Does not count direct reuse or energy recovery**

Section 7C. On-Site Recycling Processes

ON SITE RECYCLING PROCESSES
H10 - Metal recovery (by retorting, smelting, or chemical or physical extraction)

On-Site Recycling Codes

H10 Metal recovery (by retorting, smelting, or chemical or physical extraction) – Metals and Metal Category Compounds only

H20 Solvent recovery (including distillation, evaporation, fractionation or extraction)

H39 Other recovery or reclamation for reuse (including acid regeneration or other chemical reaction process)

Non-production related waste

- Quantity of the chemical released into the environment or transferred off-site as a result of:
  - **Remediation**
  - **Catastrophic events (e.g., earthquake, hurricane, fire, floods)**
  - **Other one-time events not associated with production processes (e.g., pipe rupture due to unexpected weather)**

Source Reduction Activities

- Material Substitutions and Modifications
- Inventory and Material Management
- Operating Practices and Training
- Process and Equipment Modifications
- Product Modifications

SOURCE REDUCTION ACTIVITIES	METHOD 1	METHOD 2	METHOD 3	ESTIMATED ANNUAL REDUCTION
S11 - REFORMULATED OR DEVELOPED NEW PRODUCT LINE	T06 - EMPLOYEE RECOMMENDATION (UNDER A FORMAL COMPANY PROGRAM)			R2 - greater than or equal to 50%, but less than 100%

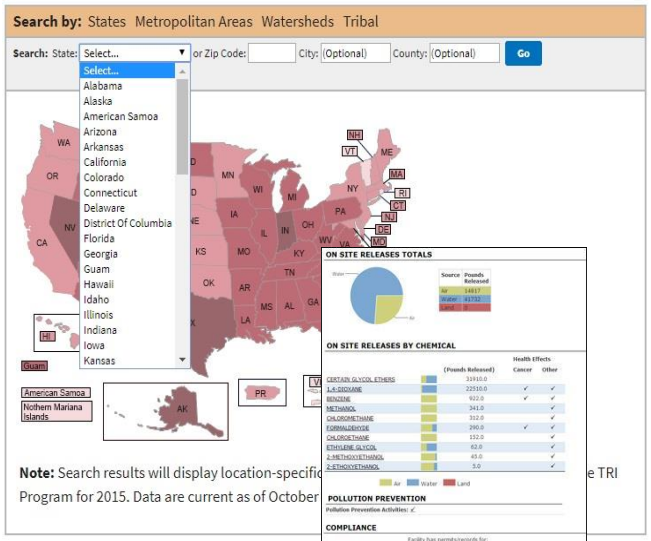
TRI Guide-ME

- Review TRI Reporting Forms and Instructions
- Browse guidance materials
- Updated chemical list
- Browse questions and answers
- Available at: http://epa.gov/tri/guideme

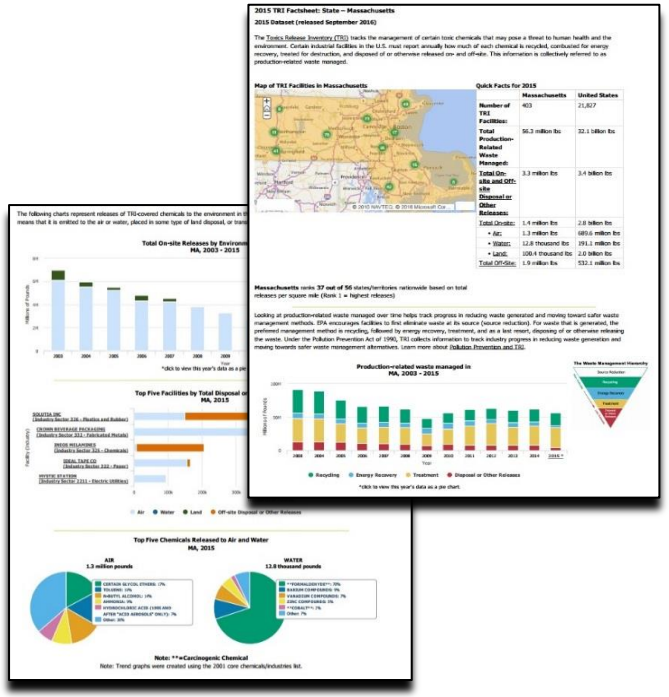
Find and Use TRI data

EPA Makes TRI Information Available

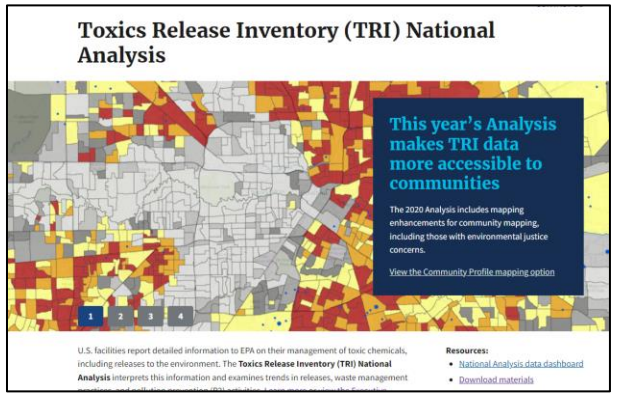
Data Access Tools



Multi-topic Factsheets



National Analysis Report



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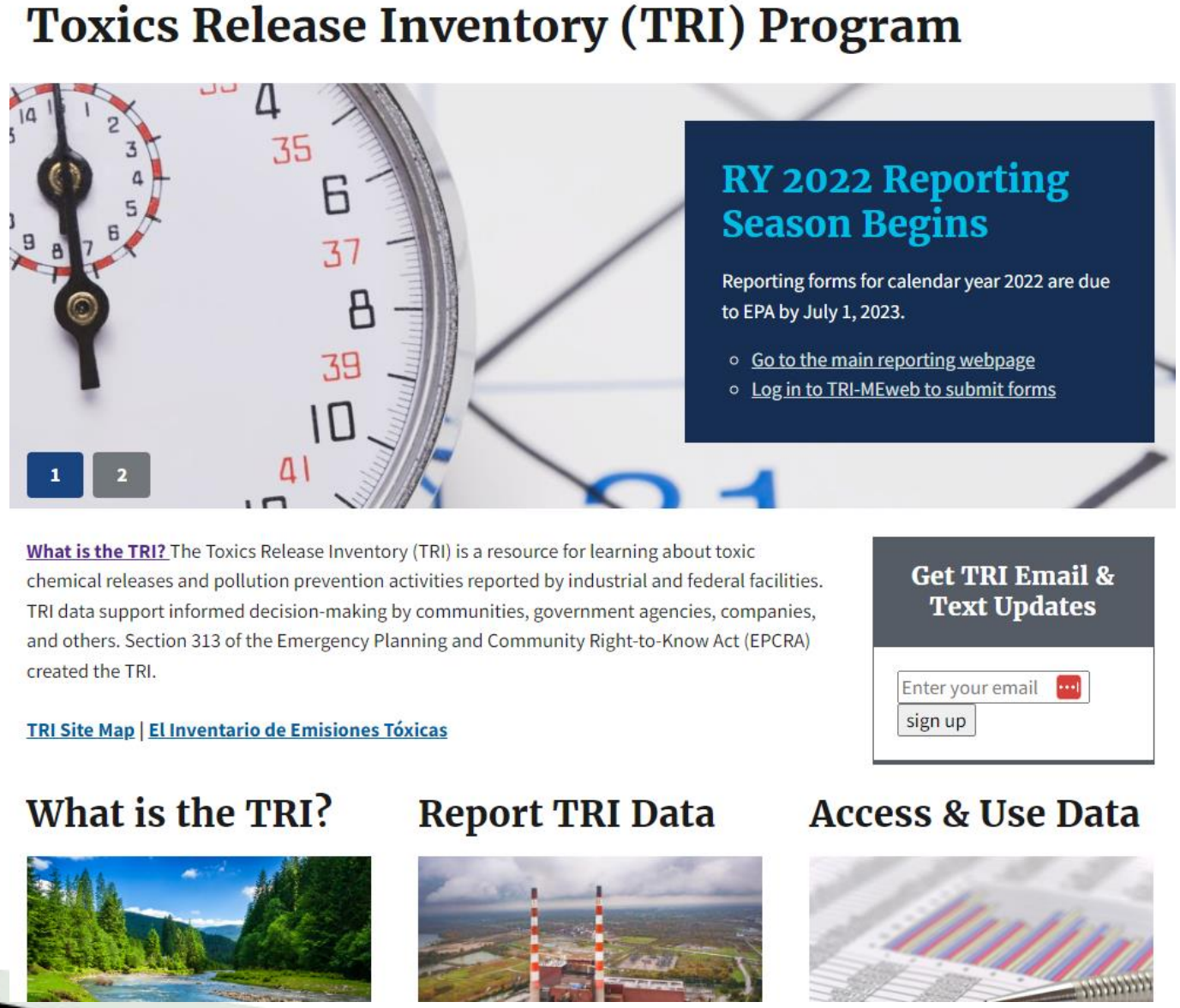
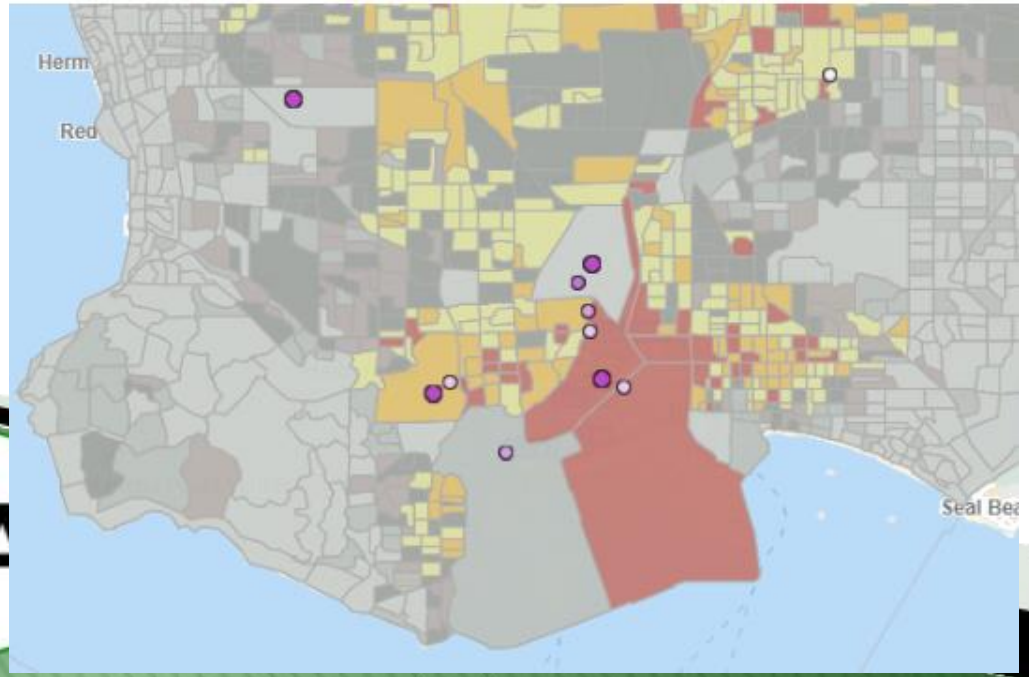
TRI Homepage

- www.epa.gov/tri
- TRI website for reporting materials and guidance, links to other pages



TRI Toxics Tracker

- https://edap.epa.gov/public/extensions/TRIToxicsTracker/TRIToxicsTracker.html
- Good for finding facilities of interest
- Search by location, chemicals reported, sector, etc.

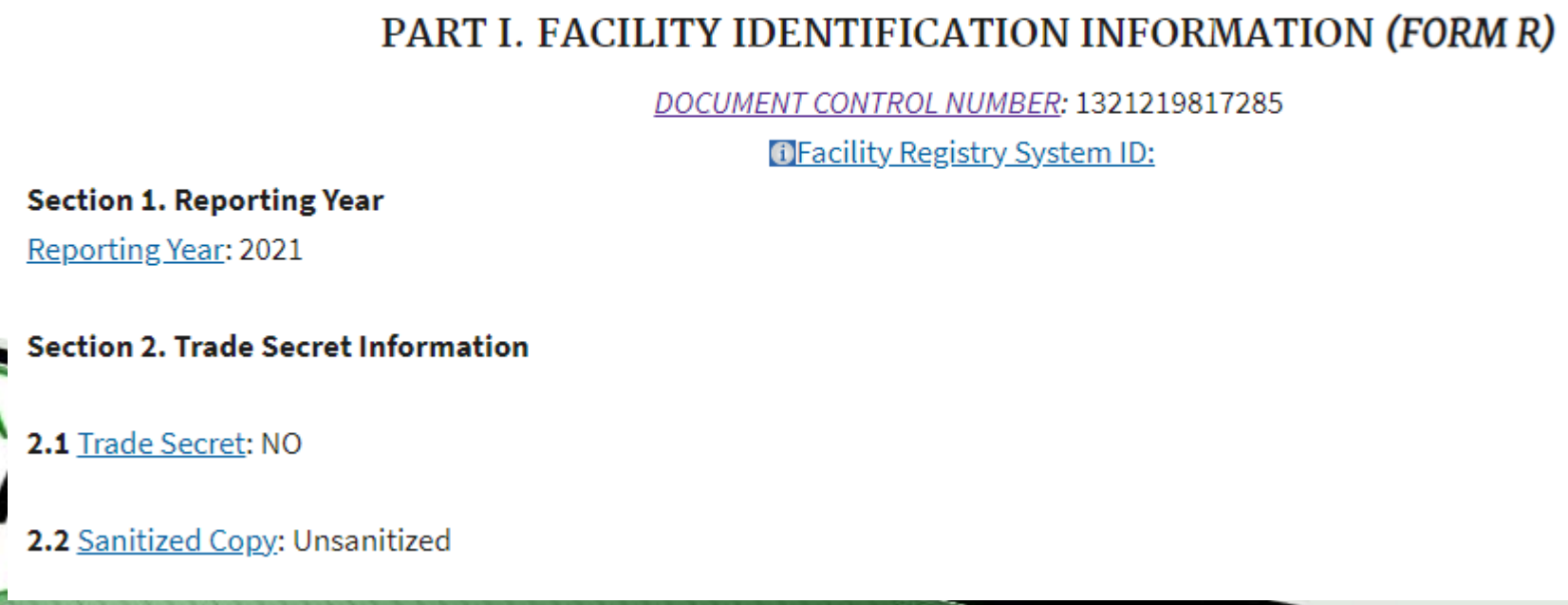


National Percentiles for Demographic Index

National Percentiles	Percentages
95 - 100 percentile	≥ 78.59
90 - 95 percentile	< 78.59
80 - 90 percentile	< 69.85
70 - 80 percentile	< 56.20
60 - 70 percentile	< 45.03
50 - 60 percentile	< 36.06
Less than 50 percentile	< 29.06

Envirofacts

- https://www.epa.gov/enviro/tri-search
- Best tool for the details from a single form
- Displays all public data elements



PART I. FACILITY IDENTIFICATION INFORMATION *(FORM R)*

DOCUMENT CONTROL NUMBER: 1321219817285

Facility Registry System ID:

Section 1. Reporting Year

Reporting Year: 2021

Section 2. Trade Secret Information

2.1 Trade Secret: NO

2.2 Sanitized Copy: Unsanitized

ECHO – Enforcement and Compliance History Online

- https://echo.epa.gov/
- Connects all major EPA programs, some state data, and enforcement
- Start here if you have a site in mind

Customize Columns | Download Data | Quick CSV Download | Source Data | Results Guide | Reports Legend

Facility Name	Mapped	Street Address	City	State	FRS ID	Reports	Count of EJ Indexes Above 80th Percentile (US - Block Group)	Compliance Monitoring Activity (5 years)	Significant Violations	Quarters with Noncompliance (3 years)	Formal Enforcement Actions (5 years)
A G LAYNE INCORPORATED		4578 BRAZIL ST.	LOS ANGELES	CA	110000473657	C A	6	0	No	0	0
AAA GLASS CORP		2800 EAST 12TH STREET	LOS ANGELES	CA	110002889599	C	11	0	No	0	0
ABBOTT ELECTRONICS INCORPORATED		2727 SOUTH LA CIENEGA BOULEVARD	LOS ANGELES	CA	110001132845	C I	10	0	No	0	0
ACE PLATING CO INC		719 S. TOWNE AVE.	LOS ANGELES	CA	110000473336	C	9	0	No	0	0

DEMO – TRI Tools

Region 9 TRI Trainings for reporters

- Region 9 TRI Trainings for reporting facilities:
  - April 18/19
  - May 15/16
  - Basic and Advanced trainings
- Contact abby.burton@erg.com or johnson.kendall@epa.gov for registration information

Questions?

Abby Burton, ERG, abby.burton@erg.com

Presenting on behalf of EPA Region 9