



# Toxic Release Inventory Reporting 101

- ▶ TRI compliance assistance - many of your reporting questions answered, and how to avoid the Top 10 TRI Trip-ups.
- ▶ This talk will include who needs to report, when and how to do so, and some examples of Pollution Prevention information. There will also be tips to avoid common reporting errors, and will cover some basic questions asked during a TRI compliance inspection.
- ▶ Follow links provided to find more information as needed.



# Big picture why, what and when

- ▶ 42 U.S.C. §11001 et seq. (1986)

Authorized by Title III of the SARA, the Emergency Planning and Community Right to Know Act **enacted by Congress** as the national legislation on community safety. Section 313 of the EPCRA requires facilities to file a Toxic Release Inventory report for each section 313 chemical exceeding an activity threshold.

- ▶ Pollution Prevention Act (1990)

**Congress passed** the PPA, which required that facilities report additional data on waste management and source reduction activities to TRI.

- ▶ Facilities need to submit their yearly reports by July 1<sup>st</sup> of the next year

**Need to report 2015 calendar year activity by July 1, 2016**



Does my facility need to report ?

Yes if you meet all 3 criteria:

➤ 1> **In a covered sector**

Defined by full six-digit NAICS codes <http://www.epa.gov/toxics-release-inventory-tri-program/my-facilitys-six-digit-naics-code-tri-covered-industry>

➤ 2> **Have 10 or more Full Time Equivalent Employees**

➤ 3> **Exceed an activity threshold**

Generally 25,000 lbs manufactured or processed, or 10,000 lbs otherwise used. Threshold Screening Tool <https://cdxnodengn.epa.gov/cdx-tri-threshold/action/Home> note lower thresholds for Persistent Bioaccumulative Toxic chemicals

# Report what how where?

## ► What chemicals are reported to TRI

- <http://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals>

## ► How to prepare a report

- <http://www.epa.gov/toxics-release-inventory-tri-program/tri-reporting-forms-and-instructions> See Reporting Forms and Instructions by Reporting Year

## ► Where to submit a report

- Through the Central Data Exchange (**CDX**) website using **TRI-MEweb**
- <https://cdx.epa.gov/CDX/Login> (Set up at least 3 days before TRI submission)
- <http://www.epa.gov/toxics-release-inventory-tri-program/tri-meweb-resources>



# Chemicals



- ▶ **TRI – Listed Chemicals** you need to report are easily found  
<https://www.epa.gov/toxics-release-inventory-tri-program/tri-listed-chemicals>
- ▶ The list can change - check every year!  
Starting **RY2015** need to report nonylphenol category chemicals



# Reporting Thresholds

## ► Threshold

- If an activity threshold [amount manufactured /processed /otherwise used] is exceeded for a toxic chemical a TRI report must be prepared and submitted for that chemical.
- Calculate the total amount of chemical used for each specific threshold activity.
- Threshold quantity is the total amount M/P/OU at the facility, not necessarily the amount released or reported to TRI

# Facility wide Threshold determination

Toxic Chemical Used *Threshold lbs	Manufacture 25,000	Process 25,000	Otherwise Use 10,000
Copper sulfate		18,000	
Cupric oxide		10,000	
Sulfuric acid (aq)			12,000

<b>REPORT to TRI</b>	
Copper Compounds	Compound categories-consider the entire weight of all the different chemical compounds in the same chemical category (M/P/OU) when determining thresholds
Do not report Sulfuric acid (aq)	Sulfuric acid (acid aerosols) qualifier

\*Note these are routine reporting thresholds. Persistent bioaccumulative toxic (PBT) chemicals have lower reporting thresholds and different reporting requirements.



# Avoid common mistakes

- ▶ Avoid the common reporting error of entering the Threshold quantity into Form R as the total amount released to the environment.
  - ▶ Really? Did ALL your Copper Compounds go up the stack as point source air emissions?
- ▶ Review that material safety data sheets are current, for currently used materials, and watch for any/all TRI reportable analytes in mixtures, and that you are using correct %

*That's a lot regarding the MSDS- read it again*

# Avoid common mistakes

- ▶ Not reporting because you track the 20K lbs of the TRI reportable chemical Bad4U as processed, but it was really OTHERWISE USED at your facility

**In the enforcement policy there is a NOTE: If an error is made in determining a facility's toxic chemical threshold which results in the facility erroneously concluding that a Form R report for that chemical is not required, this is not a data quality error, but a "failure to report in a timely manner" violation.**

- ▶ Definitions and examples of M/P/OU may be found in the Q and A

<https://www.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting> / Frequent questions Searchable Database/ (Word search 'OTHERWISE USE')



Word search the Q and A

Word search industry-specific / process specific guidance

Word search chemical-specific guidance

<https://www.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting>



BRILLIANT

## Q and A revised 1998 version word search 'threshold' or 'metal'

<https://www.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting>

### ► 108. How are threshold determinations made for metal-containing compounds?

Threshold quantities for metal compounds are based on the total weight of the metal compound, not just the metal portion of the metal compound. The threshold quantities are determined by adding up the total weight of all metal compounds containing the same parent metal. However, *release* and other *waste management* calculations are based solely on the weight of the parent metal portion of the metal compounds. Note that there are a few metal compounds that are separately listed and ....

## Q and A revised 1998 version word search 'de minimis'

<https://www.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting>

- 209. A melamine formaldehyde resin containing a small amount of unreacted formaldehyde monomer is purchased by a *facility*, dissolved in water and applied to paper to produce a polymer-coated product. In the process of coating the paper all of the formaldehyde evaporates. Is the formaldehyde *processed* or *otherwise used*?

Since the formaldehyde is not incorporated into the product, it is *otherwise used*. The formaldehyde would not be counted at all if the amount is below the de minimis of 0.1 percent in the incoming resin *mixture*.



## A few details of the Form R

- ▶ **Air Fugitives are releases Not thru stacks, vents, ducts, pipes, or other confined air stream.**
  - ▶ Yes include fugitive emits from valves, open-ended lines, leaks, etc.
- ▶ **‘Quantity of Chemical’, and ‘Transfer of Chemical in Wastes to Off-Site’ must have data entries**
  - ▶ Enter quantities released – note - reasonable estimates are required by law
  - ▶ For VOCs fugitives, NA generally would not be applicable
  - ▶ Use NA when **no possibility** of chemical being released
  - ▶ Use “0” when no release occurs or < 0.5 lbs of a non-PBT chemical was released

# Estimations and calculations

- ▶ **Emission factors-** use industry standard or site specific if appropriate. See EPA's clearinghouse for Inventories and Emission Factors <https://www.epa.gov/toxics-release-inventory-tri-program/guidance-documents-tri-reporting>
- ▶ **Engineering estimates and mass balance** calculations (using purchase records, inventories, engineering knowledge or process specifications of the quantity of the TRI chemical entering product, hazardous waste manifests, or monitoring records) may be useful in estimating fugitive emissions.
- ▶ **Welding example** - when calculate welding emissions— look up the specific emission factor associated with your weld material

# Pollution prevention activities





# Pollution prevention activities

## ➤ **Source reduction**

- Chemical substitutions to less toxic analytes
- spill and leak prevention (overflow alarms or automatic shutoff valves )

## ➤ **Recycling**

- Recover and reuse toxic chemical (distill  $\text{MeCl}_2$  and use as primary rinse)

## ➤ **Energy recovery**

- Includes the combustion of toxic chemicals in waste to generate heat or electricity

## ➤ **Treatment activities**

- Destruction of toxic chemical in waste (neutralizing waste stream)

# Pollution prevention searchable database

<https://www.epa.gov/toxics-release-inventory-tri-program/pollution-prevention-p2-and-tri>

## Examples of Source Reduction and Other Environmentally-Friendly Practices

Source Reduction Activity	Pollution Prevention (Section 8.11 free text)
W42: Substituted raw materials	We have reduced our air emissions by substituting #6 fuel oil with B50; a product that is 50% vegetable oil.
W60: Changed to mechanical stripping / cleaning devices (from solvents or other materials)	Grit blasting has been used in place of some of our acid stripping operations. Our customer satisfaction with this process will determine if it will be used as a permanent change. Otherwise our acid use will increase with expected increase in production requirements.
W51: Instituted recirculation within a process	A waste stream from the second ion exchange process that would typically be sent to the wastewater treatment system has be redirected to the first ion exchange process so the chemicals are used rather than discarded.



# Homework as needed, look up

- ▶ **De minimis rule**

- ▶ **Article exemption**

- ▶ If, as a result of processing or otherwise use, and item retains its initial thickness or diameter

- ▶ Metal wire may be bent and sheet metal cut, punched, stamped or pressed all ok if keep diameter of wire or thickness of sheet metal unchanged

- ▶ Can not emit more than 0.5 lbs

- ▶ **Determine concentrations in mixtures using appropriate range rule**

- ▶ Example MSDS 30-50%....use 40% for threshold determinations and reporting



## Do yourself a favor

- ▶ Does your TRI emissions make any relational sense to what you reported to your State Emissions Inventory?
- ▶ Does your TRI maximum amount of chemical onsite make relational sense to what you reported to TIER II?
- ▶ If you had a chemical spill/release and of course reported it to the State, do those emissions need to be accounted for on the TRI Report? There is a section for 1x releases...



# Top 10 TRI Trip-ups / Avoid common reporting errors

- 
- 10 GIGO... Double check your raw data
  - 9 Double check your data entry into TRI Forms
  - 8 Over reporting to be 'cautious'
  - 7 Reporting production ratios that do not make sense
  - 6 Not considering fugitive emissions, acid aerosols, or co-incidentally manufactured chemicals
  - 5 Yes please Reality check your emissions compared to previous years
  - 4 Avoid Waiting until the last minute to report
  - 3 Not addressing TRI-MEweb error reports
  - 2 History of Late Reporting
  - 1 Never Reporting



# EPCRA 313 Enforcement Policy

- ▶ Enforcement Response Policy for Section 313 of Emergency Planning Community Right-To-Know Act (April 2001)

<http://www2.epa.gov/enforcement/enforcement-response-policy-section-313-emergency-planning-community-right-know-act-1986>

- ▶ Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties, 40 C.F.R. Part 22:

[http://www.epa.gov/region7/citizens/pdf/lead\\_40\\_CFR\\_Part\\_22.pdf](http://www.epa.gov/region7/citizens/pdf/lead_40_CFR_Part_22.pdf)

# Self-Disclosure Audit Policy

- ▶ If you meet specific conditions, it is possible to qualify for REDUCED PENALTY \$\$\$
- ▶ Electronic disclosure information  
<https://www.epa.gov/compliance/epas-edisclosure>
- ▶ New Owner disclosures contact Julie Murray [Murray.Julie@epa.gov](mailto:Murray.Julie@epa.gov)  
913.551.7448



Your reporting questions?





# Compliance Inspections

All compliance inspection questions center around

**DATA REPORTING** threshold determination

**DATA QUALITY** reasonable values reported

**RECORDKEEPING** how you arrived at those data values



# What to expect during an inspection

- ▶ TRI inspections may be a surprise, but **are often planned** and scheduled.
- ▶ An EPA representative (inspector) will present their credentials and will likely request an overview tour of the facility, then look through records which may include purchase records of raw materials, their material safety data sheets, production records, M/P/OU reporting threshold determinations, calculations supporting chemical emissions, and any other records used to support TRI submissions.



# What to expect during an inspection

- Discuss any findings. If given a Notice of Potential Violation, you must respond in writing within 10 days. Corrective actions taken may be considered in any subsequent enforcement follow-up.
- Sign a Receipt for Documents and Samples, and a Confidentiality Notice. If confidential, then you must substantiate claim within specified timeframe.
- A copy of the inspection report will be sent to you. If you think the findings are incorrect/need clarification please say something to the case officer who sent you the report.



# Possible outcomes from a TRI Inspection

- ▶ Case close-out if no issues found = Good job!
- ▶ Letter of Warning / Notice of Non-compliance = No \$ penalty, but if noncompliant in the future, then increased \$\$ penalty
- ▶ Enforcement action routine pathway
  - ▶ Administrative Consent and Final Order = Agree on \$ penalty without going before a judge

# Road to Administrative Consent and Final Order

- ▶ A **Prefiling Letter** will be sent detailing the EPCRA 313 violations. *Example language may include:*

While the EPA believes it is appropriate to proceed with a formal enforcement action, we also recognize that settlement of this matter may be better accomplished by conducting negotiations prior to the filing of a complaint. By this letter we are offering you the opportunity to negotiate a resolution of the proposed penalty before the complaint is filed. .... As part of these pre-filing negotiations, the EPA will consider any additional information that you have that is relevant to the penalty or violations. If you are interested in participating in pre-filing negotiations, please contact me within **14 calendar days** of your receipt of this letter at the number below....

*Yes it is in your best interest to participate in pre-filing negotiations, even if you agree with the allegations*

# Road to Administrative Consent and Final Order

- ▶ **EPA is authorized to offer up to a 30% reduction in penalty if** the facility meets all requirements, comes swiftly into compliance, exhibits full cooperation, and agrees to timely Consent And Final Order settlement
- ▶ **What is a SEP?** Supplemental Environmental Project such as buying equipment for your local fire department. Instead of all the penalty \$ going to the US General Fund, a SEP keeps some of the \$ in your community. NOTE including a SEP will actually cost a little more total out of pocket <http://www2.epa.gov/enforcement/supplemental-environmental-projects-seps>
- ▶ **After negotiations are complete,** a Consent Agreement will be sent to XXX. Signature by all parties will memorialize the Agreement and obligations described within, including any SEPs and penalty payment



# TRI Reporting assistance is a click away

- ▶ TRI website <https://www.epa.gov/toxics-release-inventory-tri-program>
  - ▶ Reporting tutorials and Forms and Instructions online
  - ▶ Including general TRI Reporting Guidance, Industry-Specific, and Chemical-Specific Guidance
  - ▶ Frequently Asked Questions searchable pages
  - ▶ 1.800.424.9346 #3    [tri.help@epa.gov](mailto:tri.help@epa.gov)



# TRI Reporting assistance is a click away

- ▶ CDX / TRI-MEweb assistance

- ▶ <https://www.epa.gov/toxics-release-inventory-tri-program/tri-meweb-tutorials>

- ▶ **1.888.890.1995**

- ▶ EPA R7 TRI contact Karen T Johnson [Johnson.Karent@epa.gov](mailto:Johnson.Karent@epa.gov)

- ▶ Iowa TRI contact Elonda Bacon [Iowa.epcra@dnr.iowa.gov](mailto:Iowa.epcra@dnr.iowa.gov)



THANK YOU

