Combined Air Emissions Reporting (CAER)

for the Toxics Release Inventory (TRI), the National Emissions Inventory (NEI), and the States/Local Municipalities/Tribes (SLT)

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Background

- EPA's Toxics Release Inventory (TRI)
  - Tracks the management of certain toxic chemicals that may pose a threat to human health and the environment.
  - U.S. facilities in certain industry sectors must report how much of each chemical is recycled, burned for energy recovery, treated, or released to the environment.
  - A release of a chemical in TRI means that it is emitted to the air or water, or placed in some type of land disposal.

- EPA's National Emissions Inventory (NEI)
  - Estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources.
  - Based primarily upon data provided by State, Local, and Tribal (SLT) air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA.
  - Built using the Emissions Inventory System (EIS) first to collect the data from State, Local, and Tribal air agencies and then to blend that data with other data sources.

TRI/NEI/SLT Project: Purpose and Scope

- Purpose:
  - Identify and evaluate consistencies and possible workflows for sharing emissions data between TRI, SLTs, and NEI.
- Scope:
  - Identify differences in terminology used to define reporting requirements in each program.
  - Identify pollutants that are common between the TRI and NEI, and specify how they relate to each other if there is not a one-to-one match.
  - Research how states use TRI data for their NEI submissions.
- Team Members:
  - States: MN, SC
  - EPA: Office of Pollution Prevention & Toxics (OPPT), Office of Air Quality Planning & Standards (OAQPS), Office of Environmental Information (OEI)
  - Environmental Council of the States (ECOS)

TRI/NEI/SLT Project: Research and Analysis Steps

- Identify differences in terminology used and reporting requirements in each program
- Create a pollutant crosswalk between TRI and NEI
  - Start with existing pollutant cross walk
  - Update list of chemicals from each program
  - Reconcile outstanding questions on particular chemicals and chemical groups
  - QA/QC crosswalk
- Survey states to see if and how they use TRI data in their Emissions Inventory (EI) submissions
  - Work with ECOS to ask all states if they use TRI data in their EI submission
  - Follow up with states that use TRI data to ask how the data is used
  - Compile and summarize responses

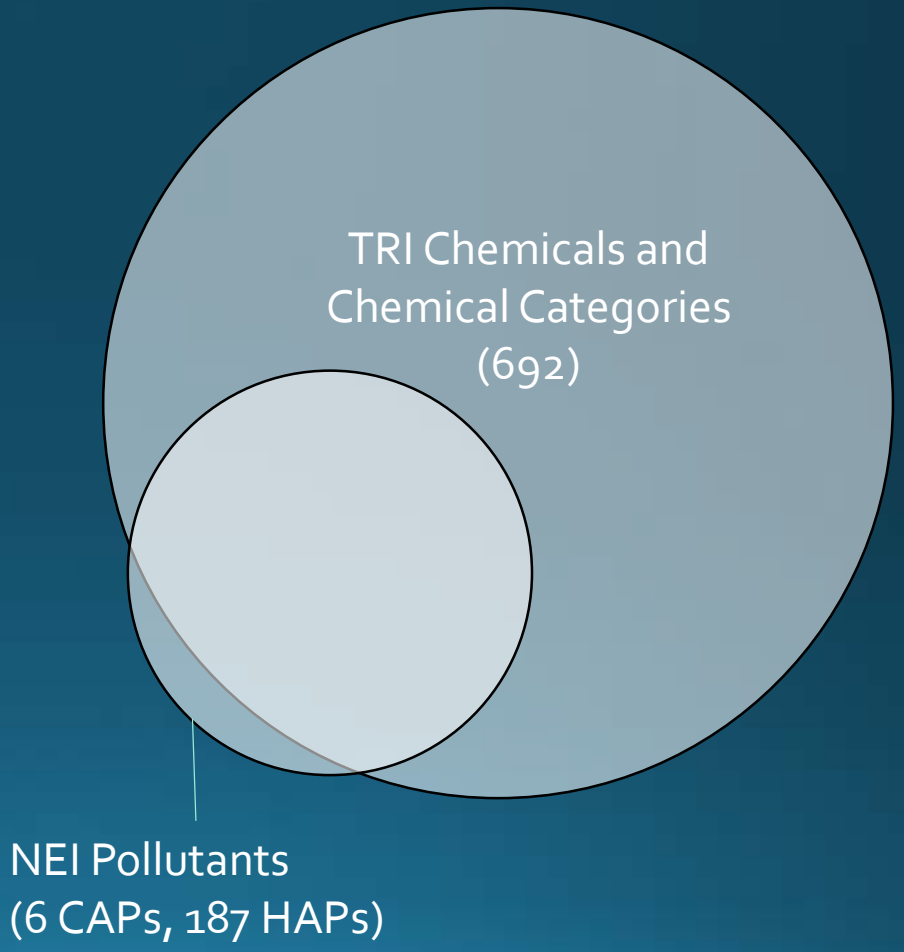
TRI/NEI/SLT Project: Results and Findings

- NEI and TRI terms and requirements comparison

	TRI	NEI
Who reports the data to EPA	The facility itself	State, local, and tribal agencies as well as EPA
Frequency of Reporting	Annually	Annual for largest sources only, every three years for all sources
Industries covered	TRI-covered sectors (e.g., manufacturing, waste management, metal mining, electric utilities)	No restrictions based on industry sector
Pollutants covered	TRI-listed chemicals (generally chemicals that cause cancer or other chronic human health effects, acute human health effects, and/or environmental effects.)	Criteria air pollutants and precursors required. Hazardous air pollutants submitted voluntarily by SLT, and estimated by EPA.

TRI/NEI/SLT Project: Results and Findings

- Pollutant Crosswalk
  - NEI:
    - 6 criteria air pollutants (CAPs)
    - 187 hazardous air pollutants (HAPs)
  - TRI:
    - 2 of the 6 criteria air pollutants: lead (which is both a HAP and CAP) and ammonia
    - Almost all (about 96%) of the 187 HAPs
    - In all, 692 chemicals and chemical categories



TRI/NEI/SLT Project: Results and Findings

- Pollutant Crosswalk
  - TRI pollutants to NEI pollutants and vice versa
  - Identified overlap in categories of chemicals
  - Discovered and corrected issue with NEI glycol ethers

NEI Typ	NEI Pollutant Category Name	TRI poll from TRI xwalk (vlookup or matched by har
HAP	4-Nitrophenol	4-NITROPHENOL
HAP	Glycol Ethers	Does this overlap with TRI "Certain Glycol Ethers"?
HAP	Ethylbenzene	ETHYLBENZENE
HAP	Styrene	STYRENE

TRI/NEI/SLT Project: Results and Findings

- Pollutant Crosswalk
  - QA and finalize pollutant crosswalk
  - Use pollutant crosswalk to update EPA's Substance Registry Services (SRS)

EPA's Substance Registry Services (SRS)

Statutes/Regulations	Synonym
FIFRA-Inerts	Hydrogen chloride
CAA 112R	Hydrochloric acid (anhydrous)
CWA 311	Muriatic acid
CERCLA	Hydrogen chloride
SARA 110	Hydrochloric acid
CWA 311	Hydrochloric acid
EPCRA 313	Hydrochloric acid (acid aerosols)
TSCA Inv	Hydrochloric acid
CAA 112R	Hydrogen chloride (anhydrous)
CAA 111	Hydrogen chloride
CERCLA	Hydrochloric acid
CWA 311	Hydrogen chloride
EPCRA 302	Hydrogen chloride (gas only)
CAA 112R	Hydrochloric acid (conc 37% or greater)
2016 CDR TSCA Inv	Hydrochloric acid
CAA112(b) HAP	Hydrochloric acid

TRI/NEI/SLT Project: Results and Findings

- Survey
  - Three states use TRI data for their EI submission: Illinois, Minnesota, and Indiana
    - Illinois and Minnesota use similar approach and incorporate TRI data into EI submission.
    - Indiana does not include TRI data in submission, but uses it to inform what they submit.
  - EPA also answered survey on how TRI is incorporated into the NEI
    - TRI data is incorporated by EPA after the Air Emissions Reporting Requirement (AERR) deadline
  - States and EPA report TRI data using the engineering judgement calculation method code

Next Steps

- Develop recommendations for near and future efforts to harmonize and utilize both systems towards the CAER goals (Part 2)
  - Develop EPA guidance for states on how to use TRI data in EI submissions
  - Investigate reporting guidance used in NEI and TRI and harmonize
  - Explore the option to expand SLT capacity to provide review capabilities of TRI reported data
  - SLT/NEI/TRI case studies to demonstrate workflows and data sharing in a test environment

Questions

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