Use of the TRI in developing the 2008 NEI v2-- Challenges and Successes
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What is the National Emissions Inventory (NEI)?
A national compilation of emissions sources collected from state, local, and tribal air agencies (SLTs) as well as from EPA emission programs. Developed by EPA’s Office of Air Quality Planning and Standards.

1. Source: stationary (large and small industries, commercial, institutional, agricultural), mobile sources, fires, and fugitive (natural emissions)
2. Pollutant: Hazardous Air Pollutants (HAPs) and criteria air pollutants (CAPs) and particulates
3. Source: HAPs are more than 30, including 191 HAP categories
4. Source details: latitude and longitude

Why and how did we use TRI to build the 2008 NEI v2?
HAP reporting by SLTs is voluntary. The amount of reporting by SLTs can vary by pollutant and data category. As indicated in the map figure below, for the 2008 NEI, most SLTs reported both HAPs and CAPs. Four states: CA, CT, NJ, and AK reported only CAPs -- no HAPs. South Dakota reported neither CAPs nor HAPs.

Challenges and successes
Inconsistent error data system made it difficult to match facilities -- we matched 38,000 out of approximately 6,100 TRI facilities (5% vs. 50,000 facilities, excluding outliers).

• Facilities are defined differently resulting in many-to-one and one-to-many relationships.
• Automated approaches using less detail so disparities matched between TRI and EIS facilities caused potential transfers to be driven not by unexpected (or differences between the two datasets).

 succeeded – ~80 million pounds of HAPs and lead (Pb) to the 2008 NEI

Examples of some key risk-driver pollutants from point sources

Regional Scale Use of TRI
EGUs are the main sources of NEI as shown by regional pattern. TRI has several high HCl emissions in Region 3 (Top 3 in TRI – NEI HCl emissions not consistent for these facilities.

Dry Cleaners reported in Point Inventory in some California counties explains Agh Region 9 peak; high dryer emissions at a few Illinois facilities explains Region 5 peak.

When TRI was not used…

Comparison of TRI and NEI Emissions – Where TRI was not used can determine potential outliers in both datasets

References
3. EGU (Electric Generating Units) Source Analysis Data: http://www.epa.gov/ttn/atw/utility/utilitypg.html
4. Mercury and Air Toxics Standards (MA TS) data: Acid gas (HCl, HF, HCN) and metal (Cr, Hg, Pb, and Ni) emissions used primarily for the MA TS.
5. HAP emission estimates developed for 2008 and other years in support of rule development can be downloaded from the MA TS Portal, http://www.epa.gov/ttn/atw/utility/mats_final_current_base_hap_inven.xlsx
6. The most recent inventory of the TRI is the 2012 TRI report, which is also available online at http://www.epa.gov/ttn/atw/tri/tri/utilitypg.html

Conclusions
• TRI is a good source of data for the NEI
• Could make better use of it for high SLT HAP reporters and for gap filling if we can better integrate the data systems
• Need direct link between EIS and TRI facilities
• Need to identify one-to-one and many-to-one facility relationships
• Need to crosswalk pollution codes, material codes
• Data systems have inconsistent data, not only emissions but also geographic information --- should try to reconcile
• TRI is a good way to identify potential outliers in the NEI and vice versa