



A Brief Look at the Toxics Release Inventory

I. History

In 1995, Vice President Al Gore hailed the Toxics Release Inventory (TRI) as, “one of the most powerful tools in this country for environmental protection.”¹ While largely unknown to the American public, TRI has been widely hailed by specialists as an integral initiative of the government’s environmental protection efforts.

The 1984 Bhopal disaster² and the chemical leak in Institute, West Virginia catalyzed demand for a toxic chemical database in the United States. Thus, in 1986, Congress passed the Emergency Planning and Community Right-to-Know Act (EPCRA), which President Reagan signed into law as an amendment to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as the Superfund Act. Section 313 of EPCRA requires the US Environmental Protection Agency (EPA) to establish TRI, a database of routine toxic chemical emissions.³

¹ Environmental Protection Agency, “Incentive Effect of the Toxics Release Inventory (TRI),” yosemite.epa.gov/ee/epa/eed.nsf/dcee735e22c76aef85257662005f4116/19ddda6de08780b385257746000aff5a!OpenDocument (Last accessed: 10 March 2013).

² During the Bhopal disaster, over 500,000 residents of Bhopal, India were exposed to toxic chemicals with long-term health impacts when a pesticide plant run by Union Carbide India Limited exploded.

³ Environmental Protection Agency, “TRI Program Timeline,” 31 October 2012, <http://www.epa.gov/tri/tritimeline/index.html> (last accessed: 19 March 2013).

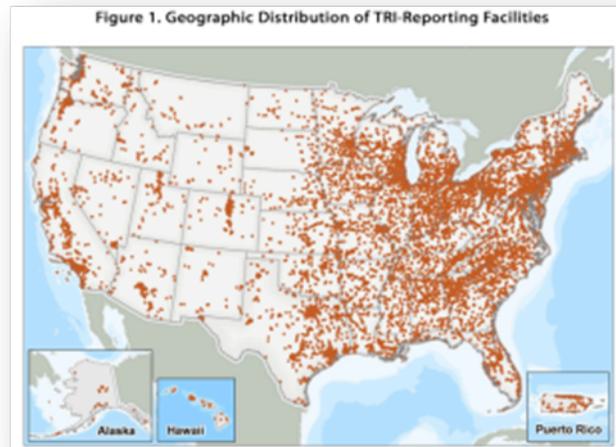


Figure 1: 2011 Distribution of TRI-Reporting Facilities

Gradually, the EPA has expanded the number of toxic chemicals whose releases must be reported as well as the threshold amounts at which chemicals must be reported as understanding of the public health consequences of various chemicals has become more comprehensive. For example, in 1990, sixteen persistent, bioaccumulative, and toxic (aka PBT) chemicals were added to the list of toxic chemicals. Congress has also played a role in the shaping of TRI. Notably, the Pollution Prevention Act of 1990 was instrumental in expanding the scope of TRI.⁴ In 2011, roughly 21,000 American facilities reported the disposal or release of 4.09 billion pounds of chemicals (See Figure 1).

II. Background and goals

Because the TRI database aims to reduce pollution through environmental data transparency, TRI has been categorized as the “third wave” of environmental management.⁵ Following the first wave of environmental regulation, which relied on command-and-control policies, and the second wave, which leveraged market-based tools, such as pollution taxes, policymakers began looking for ways to leverage broader stakeholder engagement to apply pressure in the achievement of the following goals: public empowerment, public participation, and industry self-regulation.⁶ This form of environmental management requires fewer resources from already stretched government agencies.

⁴ See 42 U.S.C. §13101 <http://www.epa.gov/p2/pubs/p2policy/act1990.htm>

⁵Michael Toffel and Glen Dowell, “Toxics Release Inventory: A Case Study in Information Disclosure Regulation,” *RegBlog*, <https://www.law.upenn.edu/blogs/regblog/2012/10/22-toffel-dowell-tri.html> (last accessed: 13 March 2013).

⁶ Hannah Aoyagi, “Linking Science to Policy Outcomes: An Evaluation of the Toxic Release Inventory (TRI),” http://www.newkirkcenter.uci.edu/fellowship_ppts/Aoyagi.ppt (last accessed: 13 March 2013).

III. Operation

TRI requires companies operating in the United States to report chemical releases, disposals, or transfers if the company:

- is in a specific industrial sector,⁷
- employs 10 or more full-time equivalent employees, **and**
- manufactures or processes >25,000 lbs. of a TRI-listed chemical or otherwise uses >10,000 lbs. of a listed chemical in a given year.⁸

EPA also specifies lower thresholds for particular chemicals whose releases have notably strong impacts on the environment and public health. EPA provides annual analysis by industrial sector, location, and chemical category in the “TRI National Analysis.”

⁷ EPA has selected the following industrial sectors to be subject to potential reporting requirements under the TRI program:

- Mining (coal, metals, quarrying etc.)
- Utilities (electric, water, sewage, hazardous waste management etc.)
- Various sectors of the manufacturing sector:
 - various sectors of the food processing industry (such as meat processing, slaughterhouses, etc.),
 - tobacco product manufacturing,
 - bottled water manufacturing,
 - textiles and apparel industry,
 - wood products and furniture industry,
 - leather products,
 - paper products and the publishing industry
 - petroleum and coal industry
 - chemical manufacturing industry,
 - metal industry,
 - plastics and rubber industry,
 - electronics industry,
 - transport equipment.

Details here: Environmental Protection Agency, “Is My Facility's Six-Digit NAICS Code a TRI-Covered Industry?” <http://www.epa.gov/tri/coveredindustries/index.html> (last accessed: 19 March 2013).

⁸ Environmental Protection Agency, “Basics of TRI Reporting,” <http://www.epa.gov/tri/triprogram/bussinescycle/index.html> (last accessed: 19 March 2013).

IV. Compliance

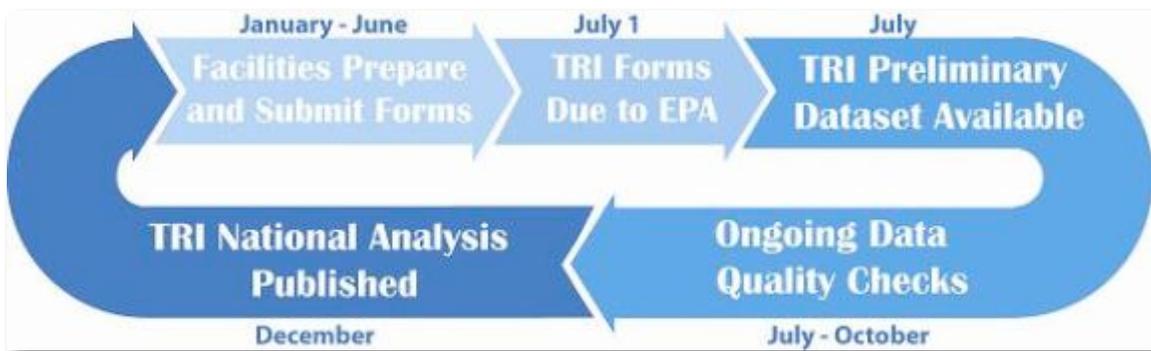


Figure 2: TRI Reporting Calendar

Companies that fail to fulfill their reporting obligations are subject to civil penalties, such as monetary fines. According to the EPCRA, qualifying companies are required to submit annual reports on the previous year's toxic chemicals by July 1 (See Figure 2). Late reporters and others violating the EPCRA may be subject to fines of up to \$27,500 per violation, per day.⁹ Recent reports indicate that EPA frequently uses its statutory authority to enforce fines on violating businesses. For instance, this past February, EPA issued a \$278,000 fine on Nevada gold mining companies with the agreement that the companies spend an additional \$340,000 to conduct "an environmentally beneficial project."¹⁰

V. Successes

By publicizing which chemicals enact the most harmful of impacts on public and environmental health standards, TRI has contributed to greater public awareness of environmental risks and charted a path for many companies to "green" themselves by minimizing the use of these chemicals. As a result, several companies have made commitments to minimizing or eliminating the use of chemicals listed in the TRI database following the establishment of the TRI program.¹¹ For example, AT&T used the TRI reporting process to locate where toxic chemicals were being used in its supply chain and worked to reduce emissions of these key chemicals.¹² Several media outlets have highlighted

⁹ Environmental Protection Agency, "Enforcement Alert," February 2004, <http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/trireports.pdf> (last accessed: 19 March 2013).

¹⁰ Environmental Protection Agency, "EPA Requires Nevada Gold Mining Companies to Correct Reporting Violations," 6 February 2013, (last accessed: 19 March 2013). <http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/trireports.pdf>

¹¹ Companies' commitments: <http://yosemite.epa.gov/ee/epa/eed.nsf/dcee735e22c76aef85257662005f4116/19dda6de08780b385257746000aff5a!OpenDocument>

¹² James Patell and Marcy Trent, "AT&T Environment and Safety," World Resources Institute Sustainable Enterprise Program, 1994, http://pdf.wri.org/bell/case_1-56973-125-X_full_version_english.pdf (last accessed 21 March 2013).

TRI data, such as in *Fortune* magazine's "green index," which ranks the sustainability of American manufacturers.¹³

VI. Challenges

The TRI program has primarily been criticized for the three following reasons, which I will detail below: the regulatory burden on industry, a perceived lack of enforcement, and limited public awareness. One, although forcing businesses to self-report removes the regulatory burden from the EPA, companies must invest in TRI reporting mechanisms, a cost that the consumer ultimately bears.¹⁴ Two, a consensus of grassroots actors find that the EPA fails to enforce punishment on many firms failing to comply with their statutory requirements under TRI.¹⁵ EPA has found it difficult to identify facilities that have failed to comply with the TRI program, such as facilities that were required to report, but did not, or facilities that have otherwise misrepresented themselves in their reporting. Moreover, many companies are afraid of publicizing trade secrets through the TRI program. EPA has, therefore, institutionalized a path to protecting a company's trade commercial secrets while maintaining data transparency.¹⁶ Three, many specialists suggest that there is limited public awareness of TRI's objectives and activities.¹⁷ Moving forward, EPA must address these complaints to achieve a more robust TRI program.

VII. Appendix

- [Form R](#) – standard form
- [Form A](#) – expedited form for enterprises emitting fewer than 5,000 pounds of listed chemicals

¹³ National Center for Environmental Economics, "9.3.2. Incentive Effect of the Toxics Release Inventory," <http://yosemite.epa.gov/ee/epa/eed.nsf/fa6512c6e51c4a208525766200639df2/022de31c8b391f0a8525777d000cbcf!OpenDocument> (last accessed 20 March 2013).

¹⁴ Angela Logomasini, "Toxics Release Inventory," Competitive Enterprise Institute, <http://cei.org/sites/default/files/Angela%20Logomasini%20-%20Toxics%20Release%20Inventory.pdf> (last accessed: 19 March 2013).

¹⁵ For example see:

- Environmental Integrity Project (2004) Who's Counting: The systematic underreporting of toxic air emissions. <http://www.greenhoustontx.gov/reports/whoscounting.pdf>
- U.S. House of Representatives (1999) Oil Refineries Fail to Report Millions of Pounds of Harmful Emissions. Minority Staff, Special Investigations Division.
- U.S. GAO (2001) Air Pollution: EPA Should Improve Oversight of Emissions Reporting by Large Facilities, GAO-01-46, April 2001.
- DeMarchi S and JT Hamilton (2006) Assessing the accuracy of self-reported data: an evaluation of the toxics release inventory. *Journal of Risk and Uncertainty* 32: 57-76.

¹⁶ Environmental Protection Agency, "Reporting Forms and Instructions," Sub-heading: Trade Secret Submission and Substantiation, http://www.epa.gov/tri/reporting_materials/forms/index.html#6 (last accessed: 20 March 2013).

¹⁷ Hannah Aoyagi, "Linking Science to Policy Outcomes: An Evaluation of the Toxic Release Inventory (TRI)," http://www.newkirkcenter.uci.edu/fellowship_ppts/Aoyagi.ppt (last accessed: 13 March 2013).