2019 TRI National Analysis Frequently Asked Questions

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Overview of the 2019 Data

Q: What are the highlights of the data analysis for 2019?

TRI chemical wastes that are generated at facilities from ongoing, routine production operations are called production-related wastes. These wastes are managed by any of several methods including: releases to the environment, recycling, treatment for destruction, or combustion for energy recovery. Total production-related waste managed is the combined total quantity of production-related TRI chemical waste that was released to the environment, treated, combusted for energy recovery, and recycled by facilities that report to TRI. The total quantity of production-related TRI chemical wastes managed by facilities during 2019 was 30.7 billion pounds, a 4% decrease from 2018. Most (89%) of the 30.7 billion pounds of TRI chemical waste was managed through preferred waste management practices such as recycling and was not released to the environment.

From 2018 to 2019, the total quantity of TRI chemicals disposed of or otherwise released to the environment also decreased:

- Total releases decreased by 9% (329 million pounds). Excluding the metal mining sector, disposal or other release quantities decreased by 5% (104 million pounds) from 2018.
- Releases to air decreased by 4% (23 million pounds).
- Releases into surface waters increased by 3%.
- On-site disposal to land decreased by 13% since 2018, primarily due to decreased land disposal from the metal mining sector.

Q: Is the change in disposal or other release quantities comparable to that of prior years?

Total disposal or other release quantities of TRI chemicals decreased by 9% from 2018 to 2019. From 2017 to 2018, the total quantities disposed of or otherwise released decreased by 5%. Much of the change from year to year is due to reporting from the metal mining sector, which accounted for 44% of all disposal or other releases for 2019. Disposal or other release quantities reported by the metal mining sector can vary significantly from year to year. Mining wastes containing TRI chemicals include waste generated during the extraction, beneficiation, and processing of minerals, and are subject to applicable federal environmental statutes and regulations (such as the Clean Air Act, the Clean Water Act, the Comprehensive Environmental Response, Compensation, and Liability Act, and the Emergency Planning and Community Right-to-Know Act) and applicable state regulations.

Since 2007, disposal or other release quantities of TRI chemicals have decreased by 19% (766 million pounds). Most industry sectors covered by TRI reduced the total quantities of TRI chemicals they disposed of or otherwise released into the environment over the 2007 to 2019 timeframe. This long-term decrease is driven mainly by declining releases of TRI chemicals to air, down 57% (756 million pounds) since 2007. Reductions in air emissions are driven by decreases in the electric utilities sector. (Using 2007 as the base year for trend analyses provides both a sufficient number of years of comparison to draw meaningful conclusions about the direction of any trends in the data, and allows for an end-to-end comparison between economically similar years, prior to the impacts of the 2008-2010 recession.)

Q: What is EPA doing to help sectors decrease the quantities of TRI chemicals they dispose of or otherwise release to the environment?

EPA's Pollution Prevention Program helps identify pollution prevention (P2) options for industry sectors

through a variety of assistance and information-sharing programs, such as P2 grants , the Safer Choice Program, and other programs. Learn more at EPA's P2 webpage. In addition, the TRI program makes its pollution prevention information accessible to promote the implementation of effective P2 practices through the TRI P2 webpage.

Q: What is production-related waste and why does EPA include information about this quantity as well as total disposal or other releases?

Production-related waste is TRI chemical waste generated from normal operations at a facility and managed by the facility through recycling, combustion for energy recovery, treatment (i.e., destruction), and/or disposal or other releases to the environment. It does not include TRI chemical wastes resulting from accidents, remedial actions, catastrophic events, or other one-time events not associated with normal or routine production processes. Facilities can manage waste on site or ship it off site. The quantity of production-related waste of a TRI chemical or TRI chemicals is the sum of the quantities of the TRI chemical (or chemicals) managed as waste on-site or off-site. Including information on the management of production-related waste provides a greater understanding of how TRI chemicals are managed, rather than focusing only on their final disposition through disposal or other release.

EPA encourages facilities to strive to eliminate waste at its source. In other words, facilities should avoid generating the waste in the first place whenever feasible. For waste that is generated, the preferred management methods are recycling, followed by combusting for energy recovery, treating and, as a last resort, disposing of or otherwise releasing the waste. The percent of the quantities of production-related waste managed through each of these management methods has changed over time, with a larger proportion recycled and a smaller proportion disposed of or otherwise released in recent years. The table below shows the percent of the production-related waste quantities for each waste management method in 2007, 2018 and 2019.

Percent of production-related waste recycled, combusted for energy recovery, treated or disposed of or otherwise released			
	2007	**2018**	**2019**
Quantity Recycled	38%	52%	53%
Quantity Combusted for Energy Recovery	11%	10%	10%
Quantity Treated	33%	26%	26%
Quantity Disposed of or Otherwise Released	18%	12%	11%

Note that the proportion of production-related waste that was recycled increased to 53% in 2019, and recycling is a more preferable way to manage TRI chemical wastes than disposal or otherwise releasing the chemical waste into the environment.

Q: How many facilities reported for 2019? Is it different from prior years?

A total of 21,393 facilities reported to TRI for 2019, which was similar to the number of facilities that reported for 2018. The number of facilities reporting to TRI has decreased by 9% since 2007.

There are many reasons why a facility may report to TRI one year but not report the next year. Each of the following reasons may account for some portion of the annual changes in facilities reporting to TRI:

- Each year a facility must evaluate whether it meets the criteria to report to TRI. A facility must file a TRI report if it: is a federal facility and/or in an industry sector that is within the scope of sectors

subject to TRI reporting; has at least 10 full-time equivalent employees; and if within a calendar year manufactures, processes or otherwise uses a TRI-listed chemical in quantities above a threshold amount.

- Some facilities had a reduction in employees that causes them to drop below the employee threshold.
- Some facilities stopped production, either temporarily or because the facility closed, and did not exceed a TRI reporting threshold during the reporting year.
- Some facilities changed their processes so that they no longer use any chemicals on the TRI list or have reduced their use of TRI chemicals below the reporting thresholds for those chemicals.
- Some facilities may have failed to report to TRI even though they fit the criteria. EPA will review these facilities to determine if follow-up action is appropriate.

General

Q: What is new in this year's TRI National Analysis?

This year's National Analysis includes:

- A profile highlighting the fabricated metals sector.
- New infographic on the Emergency Planning and Community Right-to-Know Act (EPCRA).
- New trend analysis of ethylene oxide releases.
- New comparisons of production-related wastes and releases across EPA regions.

Q: What factors should I consider when using TRI data?

Users of TRI information should be aware that one cannot estimate human exposure to TRI chemicals or predict risks to human health and the environment from just the quantities disposed of or released to the environment. Also, different TRI chemicals can pose different health hazards including cancer, neurological hazards, respiratory hazards, and developmental hazards, to name a few. In addition, chemicals can cause these different effects at different levels and durations of exposure.

TRI data, in conjunction with other information, can be used as a starting point to evaluate exposures and potential risks that may result from releases of TRI-listed chemicals. Factors that users of TRI data should consider include:

- Toxicity of the chemical
- Properties of the chemical
- Proximity of populations to where releases or disposal occur
- Type of disposal or release (environmental medium), and magnitude of the release quantity
- Fate and transport of the chemical in the environment
- Waste management of the chemical, which may be subject to state, tribal, and/or federal regulatory oversight

More information related to understanding and using TRI data is available on the TRI webpage in the *Factors to Consider* document.

Q: Should I worry about releases in my community?

Large release quantities do not necessarily mean there is need to be concerned, nor do small releases necessarily mean there is a low risk. "Disposal or other releases" represent a wide variety of management methods. These range from highly controlled disposal, such as in hazardous waste landfills, to releases due to accidental leaks or spills. Many releases reported to TRI are subject to permits and/or environmental standards that establish emissions limits under Federal or State laws such as, for example, air permits issued under the Clean Air Act. These limits on releases are intended to prevent or at least minimize exposure to the TRI-listed chemical and potential risks to human health and the environment. Factors such as the properties of the TRI chemical, extent of exposure to the TRI chemical following its release, route(s) of exposure (e.g., inhalation, dermal), bioavailability from the exposure route, and sensitivity of exposed individuals to effects caused by the TRI-listed chemical must be considered before specific conclusions about risk can be made.

Q: Were any chemicals newly added to the TRI chemical list for Reporting Year 2019?

Nonylphenol ethoxylates (NPEs) were newly added to the TRI chemical list with the first reports due for reporting year 2019. NPEs are nonionic surfactants used in adhesives, wetting agents, emulsifiers, stabilizers, dispersants, defoamers, cleaners, paints, and coatings. Some NPEs are toxic to aquatic organisms, while others are less toxic but break down into more toxic forms when released to the environment. 245 facilities reported releasing 307,000 pounds of NPEs in 2019. Most releases of NPEs were from the chemical manufacturing and hazardous waste management sectors.

Q: What Per- and Polyfluoroalkyl Substances (PFAS) does TRI cover and what is TRI doing to help address PFAS concerns?

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) added 172 per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by TRI. These PFAS additions are effective as of January 1, 2020. TRI reports for these chemicals will be due to EPA by July 1, 2021, for calendar year 2020 data. The NDAA established a manufacture, processing, and otherwise use reporting threshold of 100 pounds for each listed PFAS. The TRI Program will make the information submitted by facilities available to the public through its tools for accessing and analyzing TRI data. In doing so, the TRI program will keep the public informed on the releases and other waste management practices of PFAS that take place in their communities.

Q: What is the usual schedule for the TRI National Analysis?

TRI data for a given calendar (reporting) year are to be reported to EPA by facilities by July 1 of the year following manufacture, processing, use, or other type of release. These data are posted online by the end of July, as a preliminary dataset. The data then undergo extensive data quality analyses by the TRI Program, and the dataset is refreshed throughout the fall to incorporate any revisions or late submissions received by EPA. The dataset used to create the TRI National Analysis is locked down in mid-October, and the report is developed from October to January. The National Analysis report is then typically published in January.

Q: Does TRI include information on releases not related to production, such as from remedial actions or natural disasters?

Yes. Releases of TRI-listed chemicals not related to production at facilities, such as those that might occur from remedial actions or natural disasters, are reported to TRI as "non-production-related waste," meaning that the released TRI chemical waste was not associated with normal production processes.

These are wastes resulting from remedial actions, catastrophic events (e.g., natural disasters such as hurricanes), or one-time events otherwise not associated with production processes. Note that this information is only reported to TRI if the facility met all three of the TRI reporting criteria of 1) exceeding the chemical activity threshold; 2) exceeding the employment threshold; and 3) is operating within a TRI-covered sector.

Q: Does TRI cover greenhouse gases?

TRI covers a wide range of chemicals, and some of these chemicals, such as some fluorinated chemicals, are also regulated by EPA's Greenhouse Gas Reporting Program.

Q: Do the TRI data reflect releases from hydraulic fracturing?

No. Under Section 313 of the Emergency Planning and Community Right-to-Know Act, the TRI reporting requirements apply only to facilities in industrial sectors designated by certain North American Industrial Classification System (NAICS) codes. Facilities that extract crude petroleum or natural gas from the earth and companies that extract natural gas through hydraulic fracturing are not within the scope of sectors subject to TRI reporting requirements. For a list of all TRI-covered NAICS categories please see the North American Industry Classification System (NAICS) Codes as described on the TRI webpage.

Q: Was the 2019 TRI National Analysis affected by the COVID-19 pandemic?

The 2019 National Analysis reflects data on the TRI chemical waste managed by facilities in calendar year 2019, before disruptions due to the novel coronavirus began in the U.S. As noted earlier, facilities are required to submit reports to TRI by July 1 of the following year (i.e., reports for 2019 data were due on July 1, 2020). This statutory deadline was not changed in 2020 and the publication of the National Analysis proceeded according to the usual schedule. Pandemic-related disruptions to industrial activities that occurred in 2020 may be evident in the TRI reporting for 2020; TRI forms for 2020 are due July 1, 2021.