**Supporting Statement for an Information Collection Request (ICR) Under**

**The Paperwork Reduction Act (PRA)**

**IDENTIFICATION OF THE INFORMATION COLLECTION**

**Title and Number of the Information Collection**

**Title: Toxic Chemical Release Reporting**

**EPA ICR No.: 2613.02 OMB Control No.: 2070-0212**

**Docket ID No.: EPA-HQ-OPPT-2020-0078**

**Short Characterization**

This ICR consolidates the ICR for TRI Reporting currently approved by OMB under OMB Control No. 2025-0009, with the currently approved version of this ICR covering the TRI Reporting of additional chemicals. Upon OMB approval of this ICR, EPA intends to discontinue OMB Control No. 2025-0009.

This Information Collection Request (ICR) is for the information collection requirements associated with EPA’s Toxics Release Inventory (TRI) Program. Pursuant to section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA, 42 U.S.C. 11001 et seq.), certain facilities that manufacture, process, or otherwise use specified toxic chemicals in amounts above reporting threshold levels as provided in 40 CFR 372.25 must submit annually to EPA and to their designated state or Indian country officials toxic chemical release forms containing information specified by EPA; see 42 U.S.C. 11023. In addition, pursuant to section 6607 of the Pollution Prevention Act (PPA, 42 U.S.C. 13101 et seq.), facilities reporting under section 313 of EPCRA must also report pollution prevention and waste management data, including recycling information, for such chemicals; see 42 U.S.C. 13106. EPA compiles and stores these reports in a publicly accessible database known as the Toxics Release Inventory (TRI).[[1]](#footnote-2)

Currently, facilities subject to the TRI reporting requirements may use either the EPA Toxics Release Inventory Form R (EPA Form No. 9350-1), or, if they meet alternate threshold requirements, the EPA Toxics Release Inventory Form A Certification Statement[[2]](#footnote-3) (simply referred to as “Form A” - EPA Form No. 9350-2). With Form R, a facility reports one chemical per form; with Form A, a facility may report multiple chemicals per form.[[3]](#footnote-4)

In the last ICR renewal under OMB Control No. 2025-0009, EPA added data elements to the Form R and Form A. In this renewal, EPA is consolidating OMB Control No. 2025-0009 with the previously approved ICR under this OMB Control Number, 2070-0212, which covered additions to the list of toxic chemicals subject to reporting under EPCRA section 313 pursuant to the National Defense Authorization Act (NDAA) for Fiscal Year 2020. Section 7321 of the NDAA added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by TRI and provided a framework for listing additional PFAS chemicals.

Pursuant to EPCRA section 313 (and PPA section 6607, because of its linkage to EPCRA), EPA's Office of Chemical Safety and Pollution Prevention (OCSPP) collects, processes, and makes available to the public all of the information collected. EPA stores the information gathered under these authorities in a database available through the Internet. EPA, other federal, state, and local government agencies; industry; and the public use TRI extensively. Program offices within EPA and other government agencies have used TRI, along with other sources of data, to establish priorities, evaluate potential exposure scenarios, and conduct enforcement activities. Industries use TRI data to identify pollution prevention opportunities and set goals for emissions reductions. Environmental and public interest groups use TRI data to make the public more aware of releases of chemicals in their communities, as well as to initiate direct negotiation and risk reduction with facilities.

The TRI data are unique in providing a multi-media (air, water, and land) picture of toxic chemical releases, transfers, and other waste management activities by covered facilities on a yearly basis. With a centralized database and electronic data access tools, TRI provides a wide range of capabilities for a variety of users. Communities and governments can access the identities and quantities of listed toxic chemicals that many industrial facilities in their area release, transfer, or otherwise manage as waste. In addition, industries can use TRI as a tool for evaluating progress on their pollution prevention goals.

**1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

This information collection activity is a statutory requirement pursuant to EPCRA section 313 and PPA section 6607. According to EPCRA section 313(h), the purpose of the data collected by the forms is to "inform persons about releases of toxic chemicals to the environment; to assist governmental agencies, researchers, and other persons in the conduct of research and data gathering; to aid in the development of appropriate regulations, guidelines, and standards; and for other similar purposes." Additionally, Section 7321 of the NDAA mandates the addition of certain PFAS to the list of chemicals covered by TRI.

Section 6602 of the PPA establishes a national policy to prevent or reduce pollution at the source whenever feasible. To further this goal, EPA collects and disseminates information intended to fulfill that responsibility in part and to provide a basis for measuring progress in pollution prevention.

EPA’s regulations implementing TRI reporting are codified at 40 CFR part 372. Each covered facility must report on each listed chemical manufactured, processed or otherwise used in excess of the reporting thresholds established in EPCRA section 313(f)(1).

EPA established an alternate threshold[[4]](#footnote-5) under EPCRA section 313(f)(2) for a category of facilities with low amounts of a listed toxic chemical in wastes. A facility with such lower amounts of listed chemicals in wastes may submit an EPA Toxics Release Inventory Form A for the reportable chemicals instead of a Form R for each reportable chemical. Note that a Form A may contain multiple chemicals. Form A submissions foster continued attention to chemical management practices and provide important facility identification information. With a Form A, EPA and the general public receive a specific indication annually that a facility has a certain chemical; however, facilities provide less extensive reporting on chemicals when using the alternate threshold.

The information collected on the Form R, or alternatively on the shorter Form A, fulfills EPA’s responsibilities under EPCRA section 313(f)(2), addressing the statutory mandates and the public's right-to-know. Table 1 summarizes the information reported by facilities on the two types of TRI reporting forms.

**Table 1**

**Form R and Form A Information Collection**

|  |  |  |
| --- | --- | --- |
| **Information Collected** | **Form R** | **Form A** |
| Location of facilities manufacturing, processing or otherwise using these chemicals | √ | √ |
| Indication that the chemicals are being manufactured, processed or otherwise used at current reporting thresholds | √ | √ |
| Certification that the sum of amounts of the chemical in releases and waste did not exceed the appropriate Non-PBT or PBT (lead in stainless steel, brass, or bronze alloy) release and waste annual reportable amounts for that reporting year |  | √ |
| Accounting of quantities of chemicals entering environmental mediums on site | √ |  |
| Disclosure of chemical transfers to off-site locations | √ |  |
| Description of on-site waste treatment, energy recovery, and recycling processes | √ |  |
| Accounting of other disposal, source reduction and recycling activities | √ |  |
| Additional optional information on source reduction, recycling and pollution control activities | √ |  |

**2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

The overall goal of the Toxics Release Inventory Program is to provide communities with information about toxic chemical releases and other waste management activities and to support informed decision making by industry, government, non-governmental organizations, and the public.[[5]](#footnote-6) The Program’s success is due, in large part, to the right-to-know provisions contained in the legislation. By requiring that the resulting data be made publicly available "by electronic and other means," Congress ensured that the general public, the media, environmental advocates, researchers, the business community, and others could evaluate and influence industry's efforts to manage toxic emissions. Consequently, EPA makes available data collected under EPCRA section 313 and PPA section 6607 through access tools such as EPA's Envirofacts, TRI Explorer, TRI.NET, and the web-enabled mobile application myRTK.

The TRI Program now provides the TRI Preliminary Dataset within weeks after the annual July 1 TRI reporting deadline. The release consists of downloadable files on the TRI website (also accessible through Data.gov), as well as updated online data access tools (Envirofacts and TRI Explorer).

The EPA generally makes available the annual TRI National Analysis and the final dataset used for that analysis within seven months after the reporting deadline. In addition to providing information to the public via electronic means, EPA also conducts outreach activities to make key groups and the public aware of TRI. Libraries in communities all across the United States (in particular, members of the Federal Depository Library Program) provide public access to TRI data. Environmental agencies, industry, and the public use TRI data. EPA program offices use TRI data, along with other data, to help establish programmatic priorities, evaluate potential hazards to human health and the natural environment, and undertake appropriate regulatory and/or enforcement activities. Environmental and public interest groups use the data to better understand toxic chemical releases at the community level and to work with industry, government agencies, and others to promote reductions in toxic chemical releases. Industrial facilities use the TRI data to evaluate the efficiency of their production processes and to help track and communicate their progress in achieving pollution prevention goals. States use the TRI data to compare toxic chemical releases and other waste management approaches within specific industries and to set environmental priorities at the state level. See EPA’s *The Toxics Release Inventory in Action: Media, Government, Business, Community and Academic Uses of TRI Data* for more detailed descriptions of how these organizations use TRI data.[[6]](#footnote-7) EPA encourages TRI data users to provide feedback on ways to improve TRI products and services.

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Effective January 21, 2014, EPA requires the electronic submission of TRI Form R/Form A through the Internet via EPA’s Central Data Exchange (CDX) by using the Toxics Release Inventory Made Easy Web (TRI-MEweb) reporting software (except for trade secret reports, which must be submitted on hard copy). TRI-MEweb helps facilities prepare high-quality reports more easily than they could by using paper reporting forms due to a number of technology advances, including built-in data quality checks.

**4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

The basic information requested on Form R/Form A is required to be reported by law. Other statutes, however, also necessitate the reporting of information about releases of chemicals to the environment, as well as transfers, treatment, and source reduction and recycling activities, creating the possibility of overlap or duplication of reporting requirements. EPA anticipates some overlap and notes that section 313(g)(2) of EPCRA specifies that respondents may use readily available data collected pursuant to other provisions of law to complete the EPCRA section 313 reports. Information required by these other statutes may not provide readily accessible multi-media release and transfer, inventory, or pollution prevention data with the same scope, level of detail, chemical coverage, and frequency of collection as data currently included in TRI.

Several existing data sources contain media-specific data on releases and transfers, chemical inventory data, or pollution prevention information. In theory, information from these databases could be combined to form an analog of release and transfer data contained in TRI. However, given the currently available data sources (see Table 2 and Appendix A), this substitution is extremely unlikely. For example, differences exist across the databases in chemical coverage and facility coverage, as well as differences in the level of public access, reporting frequency, and the integration of data from various sources at the facility level. TRI contains information on releases, transfers, and other waste management activities for 595 individually listed chemicals and 31 chemical categories—with the total number of chemicals and chemical categories at 690. The following sections describe other sources of chemical releases and transfers, chemical inventory, and pollution prevention data and compare these sources with TRI.

**Chemical Release and Transfer Data**

TRI contains information on toxic chemicals handled by facilities, including details on quantities of chemicals managed through disposal or other release, recycling, energy recovery or treatment. These data include: 1) on-site releases with details on releases by environmental media (e.g., stack or point air emissions, discharges to receiving streams or water bodies, etc.), and 2) off-site transfer data with details on the off-site locations that receive transfers and the disposal, treatment, energy recovery, or recycling methods used to manage the chemicals at the off-site locations. Waste management data include quantities that are treated, used for energy recovery, or recycled and are discussed in the section on pollution prevention below.

Table 2 presents a summary of national databases containing fixed location data on chemical releases and transfers, each of which are discussed in this section. Appendix A provides a comprehensive list of relevant data sources.

**Table 2**

**Federal Databases with Air Release, Water Discharge, and Waste Management Data**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Source** | **Media and Chemical Coverage** | **Relevant Release Statistics Available** | **Ease of Database Substitution for TRI Dataa** |
| National Emissions Inventory (NEI) | Contains annual emissions of 8 criteria air pollutants (CAPs) and 187 hazardous air pollutants (HAPs) for facilities. | Total annual releases. | Includes air releases only. Data are updated only every 3 years. Coverage of TRI chemicals is limited. TRI is the source of the NEI record for 62% of the 43,372 facility-chemical records (2011). |
| Integrated Compliance Information System–National Pollutant Discharge Elimination System (ICIS-NPDES) | Contains monthly discharge monitoring data for selected water parameters/pollutants and flow rates for all CWA major and many minor sources. | Concentration data; EPA now derives annual releases of pollutants for which concentrations and flows are reported as part of periodic discharge monitoring reports. | Includes a limited number of indicator parameters for which a monitoring requirement or discharge limit has been set. Many discharge parameters are not specific to an individual Chemical Abstract Service (CAS) number. Very limited monitoring data for minor dischargers. There were 3,196 facilities in TRI with water discharges greater than zero. 2,367 (74%) also have NPDES permit IDs. |
| Biennial Reporting System (BRS) | Contains annual volumes of RCRA wastes and how they are managed (offsite in the case of Large Quantity Generator and on-site in the case of treatment storage and disposal Facilities, TSDFs). Each waste stream is characterized by all applicable waste codes but volumes of each are not broken out. Data are reported once every two years. | Total annual off-site transfers of hazardous waste for land disposal; releases to publicly owned treatment works (POTWs). | Many RCRA waste codes are not specific to an individual CAS number. Quantities of chemicals in waste cannot be determined from BRS. Of about 25,900 facilities in Reporting Year (RY) 2013, 24% reported hazardous waste generation to RCRA BR and also reported to TRI. Of about 21,600 TRI filers in RY2013, 29% also reported hazardous waste generation to RCRA BR. |
| a “Ease of substitution” refers only to the potential of the information in the database to substitute for TRI reporting. It does not imply that the database is not adequate for the purposes for which it was designed. | | | |

***Air Releases***

The 1990 amendments to the Clean Air Act require EPA to monitor and regulate the emissions of criteria air pollutants (CAPs) and hazardous air pollutants (HAPs), requiring EPA to identify the sources of these pollutants, quantify the sources by category, develop regulations, and then assess public health and environmental impacts. To facilitate this process, the Agency created two emissions inventories: the National Toxics Inventory (NTI) for HAPs and the National Emission Trends (NET) for CAPs. In 1999, the EPA combined these two databases to form the National Emissions Inventory (NEI).

NEI is EPA's compilation of estimates of air pollutants discharged on an annual basis and their sources. Five main categories organize NEI data: point sources (stationary), nonpoint sources (stationary), on-road sources (mobile), non-road sources (mobile), and events (fires). The compilation includes emissions estimates submitted by state, local and tribal air pollution control agencies, emissions estimates calculated by EPA, and emissions obtained from other sources. EPA uses the NEI to track emissions trends over time, develop regional pollutant reduction strategies, set and analyze regulations, perform air toxics risk assessments including inhalation risks and multi-pathway exposure, model air pollutant dispersion and deposition, and measure environmental performance as required by the Government Performance and Results Act.

Since 1996, EPA has compiled the NEI every three years. For 2008, the Agency reengineered the NEI business process to shorten the period between collecting data for a given inventory year and publication of those data. The most recent inventory is the 2017 NEI, which EPA last released in 2020.

While both datasets contain facility-chemical records with annual release estimates, there are a number of differences between NEI and TRI, including, which chemicals are in scope, the industrial sectors included in the inventory, and the type of information collected (e.g., for which environmental media releases are collected, and what other information besides environmental releases are collected).

* TRI reporting is required for 595 chemicals and 31 chemical categories known or reasonably anticipated to cause acute or chronic health effects or significant adverse environmental effects. NEI covers 8 Criteria Air Pollutants (CAPs) (i.e., carbon monoxide, volatile organic compounds, oxides of nitrogen, sulfur dioxide, particulate matter ≤ 2.5 microns, particulate matter ≤ 10 microns, ammonia, and lead) and 187 Hazardous Air Pollutants (HAPs). TRI covers two of the CAPs (ammonia and lead) and 181 of the 187 HAPs covered by NEI.
* NEI covers all sources of CAP and HAP emissions, including a number of sectors that are not included in TRI (e.g., agriculture, oil extraction and construction).
* NEI includes county-level emissions estimates for area, mobile and other sources not found in TRI.
* TRI includes information on releases, including air emissions and other types of releases (e.g., surface water discharges, underground injection, and landfill disposal of toxic chemicals). NEI focuses entirely on air emissions.
* TRI includes source reduction and waste management data that can be used to assess pollution prevention trends on a facility basis. For some records, NEI provides more detailed emission source-specific data about releases, such as process descriptions, throughput and stack height. The different information captured by the data systems largely reflects the different goals behind the development of the inventories. TRI’s main purpose is to provide the public with information about potential chemical hazards, whereas NEI, among other purposes, seeks to produce data that would support modeling and risk assessment needs.
* TRI has reporting thresholds such as employment on site and chemical use/manufacture. NEI does not have such thresholds and includes smaller facilities as point sources or area sources. For example, a facility must report to TRI only if it has 10 or more full-time employee equivalents and manufactures, processes or otherwise uses any TRI-listed chemical in quantities greater than the established threshold (typically 25,000 pounds for manufacturing and processing and 10,000 pounds for otherwise use). PBT chemicals have lower thresholds for reporting to TRI. Organizations contributing to NEI are expected to submit release estimates for all CAA major facilities, defined as having the potential to emit ten or more tons per year of one HAP or 25 tons per year or more of any combination of HAPs.
* TRI data are reported by individual facilities, certified by facility officials, NEI data are compiled from a variety of sources and methods.

***Water Discharges***

The Integrated Compliance Information System–National Pollutant Discharge Elimination System (ICIS-NPDES)[[7]](#footnote-8) is the repository of wastewater discharge monitoring and other CWA compliance activities (e.g., construction plans) required by CWA permits. The system also contains information about the compliance status, inspections, and enforcement actions related to facilities that discharge to surface waters ([www.epa.gov/enviro/facts/pcs-icis/search.html](http://www.epa.gov/enviro/facts/pcs-icis/search.html)). For entities permitted to discharge wastewater into navigable waters, ICIS-NPDES contains information on permit issuance and expiration dates, quantities of wastewater and concentrations of pollutants facilities are permitted to discharge, and monitoring data measuring facilities’ discharges. ICIS-NPDES data are not directly comparable to TRI:

* Permit compliance data in ICIS-NPDES typically include monthly monitoring measures of pollutant concentrations in effluent discharges and measured flow, while TRI includes estimates of the total amount (in pounds) of a pollutant discharged to water. EPA now derives annual loadings from ICIS-NPDES, which is comparable to TRI releases to water.
* Monitoring required by the National Pollutant Discharge Elimination System (NPDES) covers only parameters the permit writer deems necessary to ensure compliance with permit limits set for the protection of the receiving water. The selected chemicals in wastewater do not comprehensively cover all TRI chemicals discharged to surface water at specific facilities. For TRI Facilities in Reporting Year (RY) 2011 with non-zero water releases, 9,677 of 11,468 (84%) also had NDPES Permit IDs.

***Waste Disposal***

Under the Resource Conservation and Recovery Act (RCRA), large quantity generators (LQGs) and treatment, storage, and disposal facilities (TSDFs) must submit information on the generation, management, and final disposition of RCRA-defined hazardous wastes every other year. Biennial Reporters submit the following information about each waste generated or managed in the preceding calendar year: constituent waste codes; amounts generated; on- and off-site treatment, storage, and management; wastes received; and the identification of off-site shipment recipients. Facilities submit these biennial Hazardous Waste Reports to the state or EPA Regional office. Following processing by the states and EPA Regions, these biennial reports (BR) are transferred into the BR module of EPA’s RCRAInfo system. The Biennial Reporting data do not duplicate the information contained within TRI, as: (1) hazardous waste codes do not map to unique chemicals; (2) quantities of specific chemicals in the waste stream cannot be determined; and (3) reporting occurs every other year, as opposed to annually for TRI.

# On-site Chemical Inventory Data

In addition to data pertaining to releases, on-site management and transfers, TRI Form R requires reporting of the maximum amount of a qualifying chemical that is on site at any one time during the reporting year. There are a number of federal programs that also require disclosure of the presence or handling of chemicals and some that also require reporting of maximum amount on-site.

# Under EPCRA section 312, the Emergency Response Program requires regulated facilities to submit annual inventory reports of hazardous chemicals stored on-site to their Local Emergency Planning Commission (LEPC) and the State Emergency Response Commission (SERC). The information contained in the Tier II reports surpasses the chemical inventory data requested on TRI Form R in terms of the chemicals covered, absence of thresholds, and level of detail. As Tier II information is currently not submitted by the state SERCs or LEPCs to EPA (due to level of effort) and is not made publicly available due to homeland security concerns, this information source is not considered a ready substitute for the portion of TRI concerning maximum amount of chemicals stored on site.

Under section 112(r) of the Clean Air Act, facilities with processes that use or store more than a specified amount of certain flammable and toxic substances must develop and implement a risk management program and submit to EPA a summary of their program—called a Risk Management Plan (RMP). These plans include the amounts (in pounds) of each substance that are processed or used, hazard assessments of the potential effects of hypothetical accident scenarios, a five-year history of accidental releases involving regulated substances at the facility, and information about the facility’s accident prevention and emergency response programs. Facilities with processes that use or store more than a threshold amount (500–20,000 pounds) of a listed substance must file an RMP, including following a significant accidental release. Facilities must update and resubmit RMPs in events of operational changes, an accident, or every five years. RMP inventory data (i.e., identification of chemicals used and maximum amount on-site) do not substitute for TRI as: (1) RMP covers only 54 of the 683 TRI chemical and chemical compound categories[[8]](#footnote-9) and (2) RMP reporting occurs every five years, as opposed to annually for TRI.[[9]](#footnote-10)

Under section 8(a) of the Toxic Substances Control Act (TSCA), chemical manufacturers and importers must report to EPA’s Chemical Data Reporting (CDR) every four years. Facilities must report chemical production amounts for sites that produce (including imported) 25,000 pounds or more of a TSCA inventory chemical substance during any one calendar year between submission periods. Facilities must also report downstream uses of their chemicals as well as characterizing end uses of the chemical. CDR includes annual production volume, chemical concentration, and physical form data not found in TRI. CDR also contains a broader range of chemicals than TRI by covering the entire TSCA list. However, CDR reporting is applicable only to chemical manufacturers (including importers). Consequently, CDR reporting does not apply to industrial facilities in other sectors that process or otherwise use chemicals. As of 2011, there were 67,162 chemicals in CDR, over 700 of which are also in TRI. In CDR, there are 4,753 facilities, 1,735 of which are also in TRI.

**Pollution Prevention Data**

TRI also collects pollution prevention data from reporting facilities. These data include quantities of chemicals managed by waste management practice (e.g., recycling, energy recovery, etc.) and source reduction activities implemented at the facility.

Under the Resource Conservation and Recovery Act (RCRA), facilities must report some pollution prevention data in their Biennial Hazardous Waste Reports (described above). While these biennial reports provide qualitative and quantitative pollution prevention information, facility and chemical coverage is not directly comparable to data required for TRI reporting. Biennial reports contain data on generation, transfer, and management of hazardous wastes; TRI reporting requires data on toxic chemicals in waste streams or process by-products (all production phases and media).

Under various state regulations, at least fourteen states[[10]](#footnote-11) implement mandatory pollution prevention programs for TRI filers, facilities that use toxic chemicals, or generators of hazardous waste. Pollution prevention data are collected under these programs and stored in databases administered by state environmental agencies. The types of pollution prevention data collected vary by state, and may include both data similar to that collected by TRI (e.g., quantities of waste managed, source reduction activities) and details not found in TRI (e.g., pollution prevention plans, costs associated with waste management, etc.). However, no federal or state program collects all of the pollution prevention data currently required by TRI.

**5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.**

Under EPCRA section 313 (b)(1)(A), facilities with fewer than 10 full-time employees (or the equivalent) do not have to report. Two particular provisions that apply to TRI reporters universally: 1) the optional range reporting provision[[11]](#footnote-12) and 2) an alternate threshold allowing Form A eligibility, are particularly beneficial to non-exempt smaller facilities with small releases and wastes. In addition, EPA has taken several steps to minimize the burden for covered small businesses. EPA added a range reporting option to the Final Rule (53 FR 4500, February 16, 1988), which codified the EPCRA section 313 reporting requirements. Range reporting was the preferred option from the Regulatory Flexibility Act analysis to provide burden reduction for small businesses. Range reporting provides an option for releases of less than 1,000 pounds to be recorded as a code representing one of three ranges (1 to 10 pounds, 11 to 499 pounds, or 500 to 999 pounds) rather than as a specific estimate of the release amount. The benefit is not, however, limited to small businesses. Note that facilities may not use range reporting on Form Rs for PBT chemicals.

In response to a petition from the Small Business Administration, EPA promulgated the alternate threshold (59 FR 61488, November 30, 1994), manifested in Form A reporting, as discussed in Section 1(b). Although any reporting facility meeting the criteria may use the alternate threshold, this alternate threshold may be particularly advantageous to small entities.

**6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

Section 313 requires annual reporting. Section 313(i) permits EPA to modify the reporting frequency by rulemaking; however, EPA must first notify Congress and then delay the initiation of such a rulemaking for at least 12 months, but no more than 24 months, from the date of the notification. In addition, EPA must find: that the modification is consistent with the provisions of subsection (h) of section313 based on:

(i) experience from previously submitted toxic chemical release forms; and

(ii) determinations made under paragraph (3).

Paragraph (3), in turn, provides that EPA must determine:

1. The extent to which information relating to the proposed modification provided on the toxic chemical release forms has been used by the Administrator or other agencies of the federal government, states, local governments, health professionals and the public.
2. The extent to which information is (i) readily available to potential users from other sources, such as state reporting programs, and (ii) provided to the Administrator under another federal law or through a state program.
3. The extent to which the modification would impose additional and unreasonable burdens on facilities subject to the reporting requirements under this section.

Since TRI represents the best available multi-media database for tracking toxic chemical releases in the United States, a change in the reporting frequency to less than once a year could have a significant impact on the availability of timely toxic chemical data and affect data users, particularly at the community level. Additionally, public access to the most current toxic chemical release data and other waste management information would become more difficult.

**7. Explain any special circumstances that would cause an information collection to be conducted in a manner:**

* **requiring respondents to report information to the agency more often than quarterly;**
* **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
* **requiring respondents to submit more than an original and two copies of any document;**
* **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;**
* **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
* **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
* **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
* **requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

Although reporting facilities must identify the chemical for which they submit reports, in situations where respondents must submit trade secret information, they can claim the chemical identity as a trade secret. In such circumstances, facilities provide a generic name as part of the information made available to the public. EPA securely stores and maintains the true identity of the chemical (see also Section 3(f) below).

**8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

**Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

**Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years - even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.**

Prior to submission to OMB, EPA made this ICR available to the public for comment through a Federal Register notice (85 FR 14483, March 12, 2020). During the 60-day comment period, EPA received one general comment that was not specific to this ICR.

Under 5 CFR 1320.8(d)(1), OMB requires agencies to provide 60-day notice in the Federal Register and otherwise consult with members of the public and affected agencies considering the proposed ICR. EPA consulted with reporting entities and requested feedback from two respondent entities—Chemours and the American Coatings Association—on anticipated reporting to TRI. Topics addressed by Chemours included clarity of the reporting instructions and suggested revisions, procedures, and requirements for reporting certain PFAS to TRI and hours and wages burden information. The American Coatings Association did not respond. See Appendix B for more information.

**9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

This collection does provide any payment or gift to respondents.

**10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy. If the collection requires a systems of records notice (SORN) or privacy impact assessment (PIA), those should be cited and described here.**

Respondents may designate the specific chemical identity of a substance as a trade secret according to EPCRA section 322. Procedures for submission and review of trade secret claims under EPCRA section 313 are set forth in 40 CFR 350. Trade secret submissions are only accepted on hard copy and must adhere to the requirements provided in 40 CFR Parts 350 and 372.85(c)(3) and in the Reporting Forms and Instructions. When a facility claims the chemical identity to be a trade secret and properly substantiates the claim, EPA will not disclose the identity of the chemical to the public. EPA securely stores forms with trade secret information and allows access to those documents only to persons with Trade Secret clearance. Data made available to the public through any means do not include trade secret information.

**11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

This collection does not request any sensitive information.

**12. Provide estimates of the hour burden of the collection of information. The statement should:**

* **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**
* **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
* **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under ‘Annual Cost to Federal Government’.**

The reporting requirements found in EPCRA section 313 apply to owners and operators of facilities that have 10 or more full-time employee equivalents (i.e., a total of 20,000 hours worked per year or greater; see 40 CFR 372.3); are included in a North American Industry Classification System (NAICS) Code listed at 40 CFR 372.23 or under Executive Order 13148; federal facilities regardless of their industry classification; and that manufacture (defined to include importing), process, or otherwise use any EPCRA section 313 (TRI) chemical in quantities greater than the established thresholds for the specific chemical in the course of a calendar year. Historically the TRI-covered industrial sectors were identified by their Standard Industrial Classification (SIC) codes. Beginning with Reporting Year (RY) 2006, the TRI Program converted from SIC codes to North American Industry Classification System (NAICS) codes (71 FR 32464, June 6, 2006). The full list of NAICS codes for facilities that must report to TRI (including exemptions and/or limitations), if all other threshold determinations are met, can be found at 40 CFR 372.23.

**Form R[[12]](#footnote-13):** Facilities reporting to TRI report releases and other waste management of listed chemicals on Form R. The required data items, summarized below, are specified in 40 CFR 372.85. Form R consists of two sections. In **Part I**, respondents report facility identification information including: facility identification number; facility name and address; NAICS code; facility Dun and Bradstreet (D&B) number; parent company name; parent company D&B number; name, email address, and phone of the technical contact; and name, email address, and phone of the public contact. In **Part II**, respondents report on the toxic chemical identity, mixture component identity, activities and uses of the toxic chemical at the facility, maximum amount of the toxic chemical on site at any time during the calendar year, quantity of the toxic chemical entering each environmental medium on site, transfers of the toxic chemical in wastes to off-site locations, on-site waste treatment methods and efficiency, and source reduction and recycling activities.

On Form R **Schedule 1**, facilities reporting on dioxin and dioxin-like compounds report the individual grams data for each member of the dioxin and dioxin-like compounds category present. Form R Schedule 1 is a four-page form that mirrors the data elements from Form R Part II Chemical-Specific Information sections 5, 6, and 8 (current year only).

**Form A:** Form A also consists of two sections. **Part I** solicits the same information as Part I of Form R (see list above) but requires a different certification statement that represents a signed statement by a facility owner/operator or senior management official. In contrast to Form R where reduced threshold eligibility is not an issue, the Form As signed statement certifies that the annual reportable amount as defined by 40 CFR 372.27(a) did not exceed 500 pounds for the reporting year, and that the amounts manufactured, or processed, or otherwise used did not exceed 1 million pounds for that year. In most instances, PBT chemicals may not be reported using Form A.[[13]](#footnote-14) In **Part II**, a facility may report multiple chemicals on a single Form A. Specifically Form A solicits the toxic chemical identity, and the mixture component identity.

**Recordkeeping**: In addition to annual reporting requirements, facilities must maintain records used to provide the information required on the form according to 40 CFR section 372.10. Those records may include estimation methodology and calculations; engineering reports; inventory, incident, and operating logs; and other supporting materials. Facilities must keep a copy of each report filed for at least three years.

**Non-Form Activities**

**Supplier Notification:** Certain suppliers of mixtures or trade name products containing reportable substances must annually notify their customers of the product's composition, if the customer is subject to EPCRA section 313 reporting. This activity includes the time required to inform customers, either by letter or through the materials safety data sheet (MSDS) for the product. EPA estimates the supplier notification burden to be 89,616 hours.

**Non-Reporter Compliance Determination:** In any given reporting year, a group of eligible facilities will complete compliance determination but will not file a Form R or Form A. The process for determining whether reporting is required is the same as described above under Form Activities; however, given that compliance determination applies to all other facilities in NAICS-code-eligible sectors (with ten or more employees)—including those that ultimately do not report to TRI—this separate activity accounts for the latter category. EPA estimates the non-reporter compliance determination burden to be 734,976 hours.

**Petitions:** Any person may petition the EPA to add or delete a chemical from the TRI toxic chemical list. EPA evaluates the toxicity of the chemical against the listing criteria established by Congress and makes a determination whether to grant or deny the petition request. If the petition is granted, EPA will propose a rule to either add or delete the chemical and after reviewing the public comments will issue a final rule. If the petition is not granted, EPA issues a notice explaining why the petition was denied. The activities required to prepare and file a petition include reading EPA policy and guidance documents and consult with EPA, prepare and conduct a literature search, write the petition and submit to EPA. EPA estimates the petitions burden to be 925 hours.

EPA provides the reporting community with instructions, guidance documents, training materials, and toll-free hotlines to assist them in completing and submitting their reporting forms to EPA. These materials are accessible online: <https://ofmpub.epa.gov/apex/guideme_ext/f?p=guideme:home>.

**Radio-Based Burden Methodology**

As was done in the previous ICR, this ICR renewal uses EPA’s new Ratio-Based Burden Methodology (RBBM), to estimate TRI respondent burden for both Form R and Form A reporting.[[14]](#footnote-15)

Ratio-Based Burden Methodology simplifies calculations, supports internal consistency, and sharpens transparency while retaining the components of the previous methodology and maintaining its overall total burden estimate as a starting point.[[15]](#footnote-16) For activities associated with filing TRI chemical reports, RBBM burden estimates include rule familiarization, reporter compliance determination, calculations and form completion, and recordkeeping. Similarly, for activities unrelated to form reporting (non-form burden) RBBM estimates include supplier notification, non-reporter compliance determination, and preparation and submission of petitions.

Figure 1 presents the equations of RBBM’s primary method: Steady State Total Burden Calculation. With RBBM’s calculation of form burden, the only variables/inputs required are total counts for Form R Chemicals and Form A Chemicals. The factors/constants of the equations include: 1) Nominal Form R unit burden, in units of burden hours per Form R Chemical and 2) A/R,[[16]](#footnote-17) a model for the ratio of Form A (single-chemical)[[17]](#footnote-18) to Form R burden.

As shown in Figure 1, multiplying the Nominal Form R unit burden by the number of Form R Chemicals provides an estimate of the total Form R burden. Similarly, multiplying the Form A unit burden (formulated as the product of A/R and Nominal Form R unit burden) by the number of Form A Chemicals provides an estimate of the total Form A burden.

**Figure 1**

**Ratio-Based Burden Methodology a**

**Two Burden Factors; Two Chemical Counts; One Wage Rate**

Steady State Total Burden Calculation

*(1) Steady State Total Burden = Form R Burden + Form A Burden + Non-Form Burden*

*Where:*

*Form R Burden = (Number of Form Rs) × (Nominal Form R Unit Burden)*

*Form A Burden = (Number of Form As) × (A/R) × (Nominal Form R Unit Burden)*

*Non-Form Burden = Supplier Notifications + Non-Reporter Compliance Determination + Petitions*

*And:*

*A/R, Ratio of Form A Burden to Form R Burden = 0.615*

*Nominal Form R Unit Burden = 35.70516* *hours per Form R Chemical*

*Form A Unit Burden (derived) = 21.95867 hours per Form A Chemical*

*(2) Steady State Total Cost = Steady State Total Burden \* (WAWR)*

*And:*

*WAWR, Weighted Average Wage Rate = $55.38/hrb*

a For a complete description of the Ratio-Based Burden Methodology, see “Revising TRI Burden to Ratio-Based Methodology” (RBBM Reference Document -Docket #EPA-HQ-OEI-2010-0835, EPA, 2011).

b Based on June 2016 wage data (as of September 8, 2016). Source: <https://www.bls.gov/ncs/ect/#tables>.

EPA considers the burden estimates it uses to be average values for the reporting community overall. As with any average, some facilities will be above the average, and others will be below it. Large, complex facilities may require more than the average time to comply; however, many other facilities subject to the rule are not large or complex. Overall, EPA considers the TRI Program burden estimates to be reasonably representative of the reporting community overall, on average.

On December 20, 2019 the NDAA for Fiscal Year 2020 was signed into law. Section 7321 of the NDAA adds certain PFAS chemicals to the EPCRA section 313 list of reportable toxic chemicals as of January 1, 2020. Specifically, the NDAA identifies 14 chemicals by name and/or Chemical Abstract Service Registry Number (CASRN) in section 7321(b) and identifies additional PFAS based on the following criteria:

“(i) listed as an active chemical substance in the February 2019 update to the inventory under section 8(b)(1) of the Toxic Substances Control Act (15 U.S.C. 2607(b)(1)); and (ii) on the date of enactment of this Act, subject to the provisions of—

(I) section 721.9582 of title 40, Code of Federal Regulations; or

(II) section 721.10536 of title 40, Code of Federal Regulations.”

EPA is currently reviewing the above-listed criteria. It is anticipated that the requirements of the NDAA result in more than 150 chemicals being added to the TRI list of chemicals.

As established by the NDAA, the addition of these PFAS have an effective date of January 1, 2020. Accordingly, these PFAS are reportable for the 2020 reporting year (i.e., reports due July 1, 2021).

Using information submitted to EPA’s Chemical Data Reporting (CDR) program, EPA estimates that approximately 500 additional responses will be submitted due to the NDAA[[18]](#footnote-19), resulting in an increased estimated burden of 17,853 hours. EPA has previously estimated that approximately 4% of facilities reporting due to an expansion of the TRI list of chemicals will not have previously reported to TRI. As such, it is anticipated that 4% of the 500 reports will come from facilities that are new to the regulated community.[[19]](#footnote-20)

Table 3 presents the average annual burden hour estimates by form type.

|  |  |
| --- | --- |
| **Table 3 Reporter Average Annual Burden Estimate by Form Type** | |
| **Form Type** | **Unit Burden (Hours) per Form** |
| Form R | 35.70516 |
| Form A | 21.95867 |
| Notes:  1) Unit burdens include burden for all activities associated with filing a form, whether incurred at the facility level or the form level, including reporter compliance determination, rule familiarization, calculations and report completion, and recordkeeping and submission. 2) Form A unit burden is set at 61.5% of nominal Form R unit burden. 3) Burden per form does not include non-form burden (supplier notification, petitions, and non-reporter compliance determination). | |

Any given facility may file only Form Rs, only Form As, or a combination of Form Rs and Form As. Table 4 provides more details on the distribution of reporting by form type among facilities. Note also that for a given Form A filing (where multiple chemicals can be reported on a single form), the average number of chemicals reported is 2.26. Overall, each facility reports an average of 3.73 chemicals (Rs and A’s), with 11.3% of all chemicals filed via Form As.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 4**  **Form per Facility Distribution (Based on 2018 ICR with updates to reflect additional reporting due to the NDAA adding certain PFAS)** | | | | | | | |
| **Form per Facility Distribution** | **Unique Facilities** | **Chemicals** | | | **Average Chemicals per Facility** | | |
| **Form R** | **Form A** | **Total** | **Form R** | **Form A** | **Total** |
| Form A Only | 1,919 | 0 | 3,931 | 3,931 | 0.00 | 2.05 | 2.05 |
| Form R Only | 17,786 | 63,896 | 0 | 63,896 | 3.59 | 0.00 | 3.59 |
| Both Form R & Form A | 2,171 | 8,548 | 5,313 | 13,861 | 3.94 | 2.45 | 6.38 |
| **Total** | **21,876** | **72,444** | **9,244** | **81,688** | **3.31** | **0.42** | **3.73** |
| Notes:  1) Calculations are based on 2018 ICR plus additional forms resulting from the NDAA adding certain PFAS. It is estimated that under the rule, an additional 500 non-PBT chemical Form Rs will be reported and 20 new facilities will be added to the regulated community. 2) Approximately 74% percent of affected facilities filed three or fewer Form R chemicals in RY 2015. The most common number of Form R chemicals reported is one. 3) Approximately 94% percent of affected facilities filed two or fewer Form A chemicals in RY 2015. The most common number of Form A chemicals reported is zero (by facilities reporting Form A, the most common number of Form A chemicals reported is one). 4) The average number of Form A chemicals per Form A is 2.26. 5) The total average number of chemicals per facility across all types of facilities filing the form (Form A only, Form R only, Both Form R and Form A) is calculated by dividing the total number of chemicals by the total number of unique facilities. | | | | | | | |

Table 5 presents the annual estimated burden hours for the overall average conditions. These estimates represent the burden on a "typical" facility as defined by the facility filing the average number of chemicals (as represented by overall averages). As shown in Table 4, there are a variety of patterns for Form R and Form A Chemical filings by facility. Section 6(d) discusses the total annual burden to all facilities.

|  |  |
| --- | --- |
| **Table 5  Form R and Form A Reporter Typical Annual Burden Based on Average Conditions per Facility in Steady State Burden Calculation** | |
| **Form Type** | **Annual Average Facility Burden (Hours)** |
| Form R Contribution [35.70516 hours per chemical × 3.31 chemicals per facility] | 118.184 |
| Form A Contribution [21.95867 hours per chemical × 0.42 chemicals per facility] | 9.223 |
| **Overall Average** | **127.407** |

**Estimating Labor Costs**

EPA estimates labor burden for three separate labor categories (management, technical, and clerical) across multiple activities; it is necessary to obtain wage rates for each labor category in order to estimate labor costs and compute WAWR, as shown in Table 6.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 6 Derivation of the Weighted Average Wage Rate (WAWR) (June 2016)** | | | | |
| **Wage Type**  **(Burden Proportion)** | **Managerial**  **(0.03)** | **Technical (0.89)** | **Clerical**  **(0.08)** | **WAWR Composite** |
| **Occupational Type** | Management, business, and financial | Professional and related | Office and administrative support | Weighted hourly wage rate |
| Wages and Salaries | $46.64 | $35.76 | $16.89 |  |
| Total benefits | $22.73 | $15.30 | $7.41 |  |
| Overhead | $7.93 | $6.08 | $2.87 |  |
| **Total Loaded Rate** | **$77.30** | **$57.14** | **$27.17** |  |
| **WAWR Contribution** | **$2.39** | **$50.82** | **$2.16** | **$55.37** |

Table 7 summarizes average respondent costs for Form R and Form A.

|  |  |
| --- | --- |
| **Table 7 Form R and Form A Reporter Typical Annual Cost Estimate Based on Average Conditions per Facility in Steady State Burden Calculation** | |
| **Form Type** | **Annual Average Facility Cost** |
| Form R Contribution [35.70516 hours per chemical × 3.31 chemicals per facility × $55.38] | $6,545.03 |
| Form A Contribution [21.95867 hours per chemical × 0.42 chemicals per facility × $55.38] | $510.75 |
| **Overall Average** | **$7,055.75** |

Note that these estimates assume non-form burden to be a constant at 825,517 hours with an associated cost of $45,717,131. The components of this burden are:

* Petitions – 925 hours
* Supplier Notification – 89,616 hours
* Non Reporters’ Compliance Determination – 734,976 hours

EPA estimates the total cost associated with non-form burden by multiplying this constant by the WAWR (see Section 6(d) for total respondent cost associated with the TRI Program).

EPA uses the Steady State Total Burden method to estimate the total burden hours for all respondents under this ICR. EPA calculates Form R burden and Form A burden using unit burdens and single-chemical form counts; non-Form burden is a constant. These three burden components sum to calculate the Steady State Total Burden. Table 8 shows the assumed universe of TRI facilities and forms for both Form Rs and Form As for this ICR renewal.

|  |  |  |
| --- | --- | --- |
| **Table 8 ICR Universe of TRI Facilities and Forms  (Based on 2018 ICR with updates to reflect additional reporting due to the NDAA adding certain PFAS)** | | |
| **ICR Universe** | **Form R** | **Form A** |
| **Number of Chemicals (Same as Number of Forms)** | **Number of Chemicals (Average of 2.26 Chemicals per Form)** |
| Number of Facilities | 19,957 | 4,090 |
| Number of PBT Chemicals | 14,153 | 0 |
| Number of Non-PBT Chemicals | 58,291 | 9,244 |
| Number of Total Chemicals | 72,444 | 9,244 |
| Notes:  1) The sum of facilities reporting Form R and Form A above does not equal 21,876 because some facilities report both Form Rs and Form As (see Table 4). The average number of Form R chemicals per facility is 3.31. The average number of Form A chemicals per facility is 0.42. The average number of chemicals per facility is 3.73.  2) The number of Form As is equal to the number of facilities reporting Form A chemicals (4,090). The number of chemicals per Form A is 2.26 (9,244 Form A chemicals ÷ 4,090 Form As). Note that burden per Form A chemical is the key unit for tracking burden associated with a Form A, and that the conversion to number of Form As (i.e., number of Form A responses) is done to satisfy certain burden accounting and reporting requirements. 3) Due to the NDAA adding certain PFAS, it is estimated that under the rule, an additional 500 non-PBT chemical Form Rs will be reported and 20 new facilities will be added to the regulated community. | | |

Table 9 presents the total annual burden estimates for both Form R and Form A.

**Table 9**

**Total Annual Burden Estimate**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Form Type** | **Unit Burden (Hours)**  **Per Form** | **Number of Responses** | **Number of Form R or A Chemicals** | **Steady State Total Burden (Hours)** |
| Form R | 35.70516 | 72,444 | 72,444 | 2,586,625 |
| Form A | 21.95867 | 4,090 | 9,244 | 202,986 |
| Non-Form (constant) | — | — | — | 825,517 |
| **Total** | — | — | — | **3,615,128** |

EPA determined the total annual reporting cost for all respondent facilities by multiplying the WAWR by the steady state total burden. Table 10 presents the total annual reporting cost for Form R and Form A.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 10 Total Annual Cost Estimate  (June 2016 dollars)** | | | |
| **Form Type** | **WAWR** | **Steady State Total Burden** | **Steady State Total Cost** |
| Form R | $55.38 | 2,586,625 | $143,247,271 |
| Form A | $55.38 | 202,986 | $11,241,362 |
| Non-Form (Constant) | $55.38 | 825,517 | $45,717,131 |
| **Total** |  | **3,615,128** | **$200,205,764** |
| Note: WAWR is based on June 2016 BLS wage data from Table 9 of the Employer Costs for Employee Compensation news release (<https://www.bls.gov/news.release/ecec.t09.htm>). | | | |
|  | | | |

Table 11 presents the total burden and cost for complying with EPCRA section 313 for current and new reporting requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 11 Total Annual Burden and Cost** | | | | |
| **Activity** | **Number of Facilities** | **Number of Responses d** | **Annual Burden (Hours)** | **Annual Costs** |
| Form R Reports | 19,957 | 72,444 | 2,586,625 | $143,247,271 |
| Form A Reports | 4,090 | 4,090 | 202,986 | $11,241,362 |
| Non-Form (Constant) |  |  | 825,517 | $45,717,131 |
| **Total** | **21,876** | **76,534** | **3,615,128** | **$200,205,764** |
| a The total number of facilities reporting (21,876) is not equal to the sum of Form R and Form A respondents as some facilities may file both Form Rs and Form As.  b The average number of responses per respondent is 3.499.  c The basis for the estimates of facilities and responses is derived from the 2018 ICR reporting with updates to reflect the estimated impacts of the NDAA adding certain PFAS.  d More than one chemical may be filed in each Form A. | | | | |

**13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).**

* **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
* **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collections services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
* **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

EPA calculates the steady state total cost to respondents based on the time needed to complete the activities listed in Section 6(a) and the weighted average wage rate (WAWR), which is the average loaded cost for a mix of managerial, technical, and clerical labor (in proportions of .03, .89, and .08, respectively) per hour of TRI reporter burden.[[20]](#footnote-21) There are no specific capital and operation and maintenance costs associated directly with this information collection activity. There may be some small additional costs for mailing and supplies, although with the recent promulgation of the electronic reporting rule, these costs are minimized.

**14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies may also aggregate cost estimates from Items 12, 13, and 14 in a single table.**

EPA incurs burden and costs for three categories of activities: RFI and Compliance Assistance; TRI Reporting Software and Related Data Collection and Exchange; and Data Processing. Table 12 outlines these activities in detail.

**Table 12  
EPA Activities for Collecting, Processing, and Managing TRI Data**

| **Category** | **Description** |
| --- | --- |
| Reporting Forms and Instructions (RFI) and Compliance Assistance | * Revising the TRI Reporting Forms and Instructions (RFI) * Updating the online TRI Training Modules * Providing technical and regulatory support hotlines * Providing online Frequently Asked Questions and Answers |
| TRI Reporting Software and Related Data Collection and Exchange | * Revising the TRI-MEweb reporting software * Pre-populating TRI-MEweb with facility information from the previous year * Providing support for facilities to submit and certify their TRI reports using TRI-MEweb and the Central Data Exchange * Supporting simultaneous reporting to EPA and the States for facilities that are located in states that participate in the TRI State Data Exchange * Related infrastructure investments and program management for TRI-MEweb and the TRI Data Exchange |
| Data Processing | * Processing the submitted data * Conducting data quality checks * Entering data from paper forms into the TRI Processing System (TRIPS) – trade secret reports only * Disseminating data files for use in TRI-related applications * Related infrastructure investments and program management for TRIPS |

Table 13 presents the estimate of EPA burden specific to RFI and Compliance Assistance, TRI Reporting Software and Related Data Collection and Exchange, and Data Processing, in terms of Agency costs and number of FTEs.

**Table 13**

**Agency Costs and FTEs to Support the Collection, Processing, and**

**Management of TRI Form Submissions**

|  |  |  |
| --- | --- | --- |
| **Description** | **Non-FTE Cost** | **FTEa** |
| RFI and Compliance Assistance | $95,000 | 1.1 |
| TRI Reporting Software and Related Data Collection/Exchange IT Infrastructure | $1,634,320 | 2.1 |
| Data Processing | $2,097,472 | 2.0 |
| **Total** |  | **5.2** |
| **Subtotal $3,826,792 $854,156** | | |
| **Agency Grand Total: $4,680,948** | | |
| a Based on actual headcounts for RY2019. Assume GS-13, Step 1 (DCB locality) for associated $s based on OPM wage rates, with a 160% multiple to address overhead and benefits. | | |

The estimated data processing costs include fixed costs (overhead) and variable costs, which depend on the number and type of form submissions. The cost of processing TRI forms is approximately $59.50 per chemical for paper submissions (the cost of processing a Trade Secret Form) and $6.80 per chemical for *TRI-MEweb* submissions.[[21]](#footnote-22) Based on reporting year 2019, the total annual Agency cost for items, as shown in Table 13, is $4,680,948.

**15. Explain the reasons for any program changes or adjustments in hour or cost burden.**

This ICR submittal merges the existing ICR (2025-0009, approved by OMB on October 15, 2018) into this ICR number (2070-0212), created to cover the expanded list of toxic chemicals subject to reporting under the NDAA for Fiscal Year 2020, to provide for a single control number. The approved burden under the existing ICRs remains unchanged.

**Table 14**

**Summary of ICR Burden**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OMB Control Number** | **Respondents** | **Burden Hours** | **Operational Costs** | **Labor Costs** |
| 2025-0009 | 21,856 | 3,597,275 | 0 | $199,217,089 |
| 2070-0212 | 76,534 | 3,615,128 | 0 | $200,205,764 |

**16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.**

Facilities must report their information on a calendar-year basis, and submit Form Rs or Form As to EPA by July 1 of the following year. In response to public requests to shorten the time frame for release of TRI information, TRI began a modernization effort in 2007 that included transition to TRI-MEweb from desktop software, and a number of streamlining initiatives. One of the resultant improvements was the Preliminary Data Release that provides TRI database information as quickly as possible after the reporting deadline. Since 2010, EPA has released data less than one month after the reporting deadline in the TRI preliminary dataset with downloadable data files and access via TRI Explorer and Envirofacts. Following the annual July 1 submittal deadline, EPA performs data quality checks and contacts facilities EPA believes may have errors in their reports, inviting them to resubmit with corrections as necessary. Following these checks, EPA freezes the dataset in mid-October. The EPA then performs trend analyses by industry, EPA region, chemicals of specific interest, and other data elements which it publishes in its TRI National Analysis in the first quarter of the following calendar year (e.g., the National Analysis for reporting year 2019 was published in January, 2021).

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

Not applicable.

**18. Explain each exception to the topics of the certification statement identified in “Certification for Paperwork Reduction Act Submissions.”**

Not applicable. This request complies with 5 CFR 1320.9 and no exceptions are taken.

**REFERENCES**

Arbuckle, J. Gordon, et al., 1993. *Environmental Law Handbook, Twelfth Edition.* Government Institutes, Inc., Rockland MD.

U.S. Department of Labor, Bureau of Labor Statistics. *Employer Costs for Employee Compensation.* U.S. Department of Labor, Washington, D.C. September 2016.

U.S. EPA, 1986. Emergency Planning and Community Right-to-Know Act of 1986, §313 (42 U.S.C.A. §1023.

U.S. EPA, 1990. Pollution Prevention Act (42 U.S.C.A. §13101-13109. U.S. EPA.

U.S. EPA, 2007. Analysis of the Estimated Burden and Cost of Form R Schedule 1 for Dioxin and Dioxin-like Compounds; Toxic Equivalency Reporting; Community Right to Know Toxic Chemical Release Reporting (May 10, 2007).

U.S. EPA, 2008. Procedure for Quality Policy.CIO 2106-P-0.10. October 20, 2008.

U.S. EPA, 2011. Revising TRI Burden to Ratio-Based Methodology; TRI Regulatory Development Branch, TRI Program Division, Office of Information Analysis and Access, Office of Environmental Information (February 1, 2011).

U.S. EPA. 40 CFR Part 372 Toxic Chemical Release Reporting: Community Right-to-Know.

*Addition of Nonylphenol Ethoxylates Category; Community Right-to-Know Toxic Chemical Release Reporting.* 40 CFR Part 372. EPA Docket ID Number EPA-HQ-TRI-2016-0222-0001. Federal Register Vol. 83 No. 113. June 12, 2018.

*Community Right-to-Know; Adoption of 2012 North American Industry Classification System (NAICS) Codes for Toxics Release Inventory (TRI) Reporting.* 40 CFR Part 372. EPA Docket ID Number EPA-HQ-OEI-2012-0110. Federal Register Vol. 78 No. 119. June 20, 2013.

*Electronic Reporting of Toxics Release Inventory Data.* 40 CFR Part 372. EPA Docket ID Number EPA–HQ–TRI–2011–0174. Federal Register Vol. 78 No. 166. August 27, 2013.

**APPENDICES**

Appendix A: Information Sources Containing Data Subsets, but not Comprehensively

Comparable Alternatives to TRI

Appendix B. TRI Stakeholder Engagement

**Appendix A: Information Sources Containing Data Subsets,**

**But Not Comprehensively Comparable Alternatives to TRI Data**

In this appendix, data elements available from several information sources are compared to those reported to TRI. The analysis is broken down by the specific types of data collected under TRI. While some sources may appear to be substitutes for TRI, they do not adequately address the entire scope of TRI, even in combination. For example, a given source may:

* Not include all toxic chemicals covered by TRI,
* Be compiled less frequently than TRI, and/or
* Not be as easily accessible (if at all) to the general public.

**Table F-1: Relevant Information Sources**

(TRI Included for Comparison)

| **Description** | **Chemical Coverage** | **Industry/Facility Coverage** | **Reporting Frequency** | **Public Access** |
| --- | --- | --- | --- | --- |
| **TRI DATA** | | | | |
| EPCRA §313 requires facilities to submit reports on releases (including disposal) of particular toxic chemicals exceeding a given threshold. The reports provide information on the quantity of chemical released into the environment and to which medium (air, land, water) the disposal took place, as well as information about waste management and the amount of chemicals stored on-site. | The current TRI toxic chemical list contains 595 individually-listed chemicals and 31 chemical categories (including four categories containing 68 specifically-listed chemicals). | NAICS codes corresponding to SIC codes 20-39, 10; 12; 4911, 4931, 4939; 4953; 5169; 5171; and 7389.  A facility need only report if it has 10 or more Full Time Equivalents (FTEs). | Annual. | EPA compiles the TRI data and makes them available through several data access tools, including TRI Explorer and Envirofacts. Other organizations also make the data available to the public through their own data access tools. |
| **AIR EMISSIONS (SECTIONS 5.1 AND 5.2)** | | | | |
| **National Emissions Inventory (NEI)** | | | | |
| NEI provides estimates of anthropogenic pollutant emissions from stationary sources, as well as area sources and mobile sources. These estimates, submitted to EPA by delegated authorities (state or county), electric utilities, and/or generated by EPA from various sources, differ in estimation methodology used. | 8 CAPs and 187 HAPs. | No NAICS limitations. | Triennial. | CSV files can be downloaded from EPA’s Web site. |
| **Air Facility System (AFS)** | | | | |
| AFS contains compliance and permit data for stationary sources of air pollution regulated by U.S. EPA, and state and local air pollution agencies. | N/A | No NAICS limitations. | Annual. | Can be accessed on a facility-by-facility basis through EPA data access tools, including Envirofacts or the Enforcement and Compliance History Online (ECHO). |
| **State Air Emissions Inventories** | | | | |
| Several states and regional agencies maintain their own air emissions inventories. However, the amount of data as well as the types of data elements collected vary widely from state to state. | Varies widely (e.g., the California Air Resources Board maintains its own list of about 400 toxic air pollutants). | Varies. | Varies. | Most of these data are submitted to NEI. Some data are available on the Web on a state-by-state basis. |
| **Title V Part 70 Operating Permits** | | | | |
| Under the 1990 Clean Air Act Amendments, facilities designated as "major sources" and facilities otherwise subject to §112 and Title V must apply for a Title V Part 70 Operating Permit. As part of the application for a Title V permit, some facilities may have to report emissions of air toxics. | 187 HAPs. | No NAICS limitations. | At the time of permit application, renewal, and modification—permits are typically renewed every 5 years. | No central repository for the information. |
| **DIRECT DISCHARGES TO WATER (SECTION 5.3)** | | | | |
| **Integrated Compliance Information System–National Pollutant Discharge Elimination System (ICIS-NPDES)** | | | | |
| ICIS-NPDES is a national information management system that tracks implementation of the National Pollutant Discharge Elimination System (NPDES) program, authorized by the Clean Water Act. ICIS-NPDES tracks permit issuance, permit limits, self-monitoring data, compliance data and other data pertaining to facilities regulated under NPDES. | Contains monthly discharge monitoring data for selected water parameters/pollutants and flow rates for all CWA major and many minor sources. | No NAICS limitations. | Major permittees must submit Discharge Monitoring Reports (DMRs) monthly or quarterly; non-major permittees must submit at least annually. | Can be accessed on a facility-by-facility basis through EPA data access tools, including Envirofacts, and ECHO. |
| **UNDERGROUND INJECTION AND LAND DISPOSAL ON-SITE (SECTIONS 5.4 AND 5.5)** | | | | |
| **RCRA Biennial Reports** | | | | |
| Section 3002(a)(6) of the Resource Conservation and Recovery Act (RCRA)  requires EPA to develop a program for hazardous waste generators to report the  nature, quantities, and disposition of hazardous waste generated at least once every two years. In addition, section 3004(a)(2) of RCRA requires treatment, storage and disposal facilities (TSDFs) to submit a report on the wastes that they receive from off-site. The biennial Hazardous Waste Report (also known as the  “Biennial Report”) was implemented in 1985 to comply with these requirements.  The Biennial Report form (8700-13A/B) must be submitted to the authorized state agency or the EPA Regional Office by March 1st of every even-numbered year.  The form includes information such as the facility's RCRA ID number, the name  and address of the facility, the quantity of hazardous waste sent to each TSDF in  the United States and the manner in which the waste was treated during the previous year. | Contains annual volumes of RCRA wastes and how they are managed (offsite in the case of Large Quantity Generator and on-site in the case of treatment storage and disposal Facilities, TSDFs). Each waste stream is characterized by all applicable waste codes but volumes of each are not broken out. | No NAICS limitations; however, certain waste categories are excluded (e.g., mining and agriculture). | Biennial. | Can be accessed on a facility-by-facility basis through EPA data access tools, including Envirofacts. Text files can be downloaded from EPA’s Web site. |
| **DISCHARGES TO A POTW (SECTION 6.1)** | | | | |
| **RCRA Biennial Reports (BR)** | | | | |
| Biennial Reports require some reporting of discharges to POTWs. See above for more details. | See above. | See above. | See above. | See above. |
| **ICIS-NPDES** | | | | |
| ICIS-NPDES allows for reporting of indirect discharges to water. See above for more details. | See above. | See above. | See above. | See above. |
| **TRANSFERS TO OTHER OFF-SITE LOCATIONS (SECTION 6.2)** | | | | |
| **RCRA Biennial Reports (BR)** | | | | |
| Biennial Reports contain hazardous waste data from large quantity generators and TSDFs. Biennial Reports also require reporting of off-site transfers on Form GM. Information includes the RCRA ID of the facility to which the waste was shipped, the processes used to treat, recycle, or dispose of the waste at the off-site facility, the off-site availability code, and the total quantity of waste shipped during the report year. The reports also provide data on the volume of hazardous waste shipped off-site for land disposal, a release end-point of relevance to TRI. See above for more details. | See above. | See above. | See above. | See above. |
| **CHEMICAL STORAGE AND INVENTORY DATA (SECTION 4.1)** | | | | |
| **EPCRA** §**312 Tier I and II Reports** | | | | |
| EPCRA §312 requires that states establish plans for local chemical emergency preparedness and that inventory information on hazardous chemicals be reported by facilities to state and local authorities. | Hazardous or extremely hazardous substances (essentially any substance that poses a health or physical hazard). | No NAICS exemptions for facilities that are covered under the reporting threshold requirements, but facilities not included under OSHA’s Hazard Communication Standard (e.g., mines) do not have to file. | Annual. | On a facility-by-facility basis, by forwarding a written request. |
| **Risk Management Plan (RMP)** | | | | |
| Under the authority of section 112(r) of the [Clean Air Act](http://www.epa.gov/osweroe1/content/lawsregs/caaover.htm), the [Chemical Accident Prevention Provisions](http://www.epa.gov/osweroe1/content/lawsregs/rmpover.htm) require facilities that produce, handle, process, distribute, or store certain chemicals to prepare a Risk Management Plan (RMP) and submit the RMP to EPA. These plans include information about chemical amounts stored and processed at RMP facilities. | Certain flammable and toxic substances. | No NAICS limitations. | At least every five years, or within six months of an incident. | Restricted access: RMP information may be accessed via the Federal Reading Rooms. |
| **Chemical Data Reporting (CDR)** | | | | |
| Under TSCA Section 8(a), chemical manufacturers (including importers) are required to report manufacturing-related information to EPA for sites that manufactured (including imported) 25,000 pounds or more of a reportable chemical substance any one calendar year between submission periods. Industrial processing and use information and commercial and consumer use information must also be reported for these sites. | Varies. | Limited to manufacturers, including importers, of subject chemicals.  Certain manufacturers are exempt, including small manufacturers (sales <$40 million), those manufacturing a chemical for research and development, those manufacturing chemicals as impurities, and those submitting information under another TSCA Section 8a rule. | Every four years. | Data claimed as Confidential Business Information (CBI) are not available to the public. Non-CBI data downloads are available from EPA’s CDR website. |
| **POLLUTION PREVENTION DATA (SECTIONS 8.1-8.7; 8.10)** | | | | |
| **RCRA Biennial Reports (BR)** | | | | |
| Biennial Reports contain pollution prevention information on hazardous waste from large quantity generators and TSDFs. Data are collected primarily by states, and are collated by EPA. See above for more details. | See above. | See above. | See above. | See above. |
| **State Environmental Agency Databases** | | | | |
| At least fourteen states[[22]](#footnote-23) implement mandatory pollution prevention programs. Pollution prevention data collected under these programs varies by state, and may include both data similar to that collected by TRI (e.g., quantities of waste managed, source reduction activities, etc.) and details not found in TRI (e.g., pollution prevention plans, costs associated with waste management, etc.). | Varies. | Varies. May include TRI filers, facilities that use toxic chemicals, and generators of hazardous waste. | Varies. | There is no central source for state collected pollution prevention data. Accessibility varies by state. |
| **EMERGENCY RELEASE DATA (SECTION 8.8)** | | | | |
| **National Response Center (NRC)** | | | | |
| NRC collects real-time information about virtually all oil and chemical spills throughout the United States to identify spills for which to coordinate emergency response. | Oils and chemicals. | No source exemptions. | Real-time. | Historical information about spills can be retrieved through the NRC online query system: www.nrc.uscg.mil/foia.html. |
| **Risk Management Plan (RMP)** | | | | |
| RMP contains a five-year accident history for each facility with details on releases of regulated substances from covered processes with 1) on-site deaths, injuries, or significant property damage; or 2) known off-site deaths, injuries, property damage, environmental damage, evacuations, or sheltering in place. See above for more details. | See above. | See above. | See above. | See above. |
| **STATE RIGHT-TO-KNOW PROGRAMS** | | | | |
| Several states require expanded state TRI reporting to include industries or facilities not covered by TRI or to report information beyond that required by the federal TRI Program (e.g., Arizona, Massachusetts, and Wisconsin). | Varies. Often identical to TRI. | Varies. May include more industries than TRI. | Annual. | There is no central source for state collected data. Accessibility varies by state. |

**Appendix B: TRI Stakeholder Engagement**

* May 11, 2020: Teleconference with The Chemours Company to discuss TRI PFAS listing
* April 16, 2020: Webinar on TRI Reporting and New Requirements for PFAS
* April 7, 2020: Presented to American Coatings Association members on PFAS added to the TRI chemical list
* March 10, 2020: Teleconference with Department of Defense EPCRA/TRI Workgroup to discuss PFAS added to the TRI chemical list
* February 19, 2020: Discussed PFAS addition to TRI with Citizens for Safe Water Around Badger
* January 19, 2020: Presented to American Chemistry Council members on PFAS added to the TRI chemical list

1. Certain sectors are subject to TRI reporting. For a complete listing of the North American Industry Classification System (NAICS) codes subject to TRI reporting; see 40 CFR 372.23. [↑](#footnote-ref-2)
2. The Form A submission requires a Certification Statement confirming that the sum of amounts of the chemical in releases and waste does not exceed the appropriate release and waste annual reportable amounts for that reporting year. [↑](#footnote-ref-3)
3. For the full set of instructions and Forms, refer to [https://ofmpub.epa.gov/apex/guideme\_ext/f?p= guideme\_ext:41](https://ofmpub.epa.gov/apex/guideme_ext/f?p=guideme_ext:41). [↑](#footnote-ref-4)
4. EPA has authority to revise the threshold amounts pursuant to EPCRA section 313(f)(2) provided that revised threshold amounts still result in reporting on a substantial majority of total releases of the chemical at all facilities subject to EPCRA section 313. A revised threshold may be based on classes of chemicals or categories of facilities. [↑](#footnote-ref-5)
5. U.S. EPA Toxics Release Inventory Program. <https://www.epa.gov/tri/> [↑](#footnote-ref-6)
6. <https://www.epa.gov/sites/production/files/documents/tri_in_action_final_report_july_2013.pdf> [↑](#footnote-ref-7)
7. ICIS-NPDES is the Clean Water Act (CWA) data system of record, replacing the Permit Compliance System (PCS). [↑](#footnote-ref-8)
8. <https://www.epa.gov/rmp/list-regulated-substances-under-risk-management-plan-rmp-program> [↑](#footnote-ref-9)
9. <https://www.epa.gov/rmp/risk-management-plan-rmp-rule-overview> [↑](#footnote-ref-10)
10. Arizona, California, Georgia, Maine, Massachusetts, Minnesota, Mississippi, New Jersey, New York, Oregon, Tennessee, Texas, Vermont, and Washington. [↑](#footnote-ref-11)
11. Range reporting provides an option for releases of less than 1,000 pounds to be recorded as a code representing one of three ranges (1 to 10 pounds, 11 to 499 pounds, or 500 to 999 pounds) rather than as a specific estimate of the release amount. Range reporting is not permitted on Form Rs for PBT chemicals. [↑](#footnote-ref-12)
12. Appendices D1, D2 and D3 provide copies of the Form A, Form R, and Form R Schedule 1, respectively. To access existing TRI Reporting Forms and Instructions, see <https://ofmpub.epa.gov/apex/guideme_ext/f?p=guideme:rfi-home>. [↑](#footnote-ref-13)
13. The exception is lead in stainless steel, brass, or bronze alloys, which are not excluded from Form A eligibility. [↑](#footnote-ref-14)
14. [↑](#footnote-ref-15)
15. [↑](#footnote-ref-16)
16. [↑](#footnote-ref-17)
17. [↑](#footnote-ref-18)
18. [↑](#footnote-ref-19)
19. [↑](#footnote-ref-20)
20. For the derivation and justification of the WAWR, see RBBM Reference Document (Docket #EPA-HQ-OEI-2010-0835), EPA, 2011. [↑](#footnote-ref-21)
21. E-mail communication with TRI Data Processing Center, November 17, 2016. [↑](#footnote-ref-22)
22. Arizona, California, Georgia, Maine, Massachusetts, Minnesota, Mississippi, New Jersey, New York, Oregon, Tennessee, Texas, Vermont, and Washington. [↑](#footnote-ref-23)