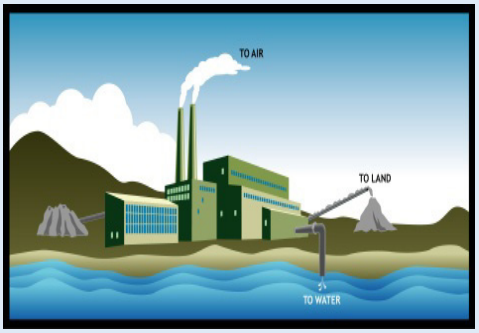
Supplemental Project Notice

2024 TOXICS RELEASE INVENTORY FOR POWER PLANTS USER'S GROUP



PROJECT HIGHLIGHTS

- Estimate, track, and report releases of TRI chemicals from coal-, oil-, and gas-fired power plants
- Reduce costs of Toxics Release Inventory (TRI) reporting
- Workshops to provide training, discuss software upgrades, and exchange TRI reporting methods and best practices

Background, Objectives, and New Learnings

To cost-effectively comply with TRI reporting requirements, power producers need tools to accurately estimate releases from fossil-fired plants and streamline the reporting process. Determining reporting responsibilities and developing credible estimates of release quantities present considerable technical challenges and can consume significant personnel resources.

Power plants that burn coal or oil, or that burn natural gas at the same facility as a coal or oil-fired plant, must report annual emissions to the U.S. Environmental Protection Agency (EPA). TRI reporting requirements for Reporting Year (RY) 2023 include 787 individually listed chemicals and 33 chemical categories. A TRI report must be filed if estimated annual mass releases of any of these chemicals or categories to land, air, and water from an individual facility exceed specified threshold values. The EPA frequently changes reporting requirements and also changes the forms and electronic data transfer procedures for reporting chemical releases.

Benefits

TRI for Power Plants RY2023 is a powerful, user-friendly tool for estimating, tracking, and reporting releases of chemicals—primarily trace substances—from fossil-fuel fired electric plants. The software has been applied by dozens of power producers to increase the efficiency and reduce the costs of TRI-related analyses, while enhancing compliance with changing reporting requirements.

Participants of the User's Group may attend workshops that provide not only training in the use of the software, but also an opportunity to exchange TRI reporting tips and methods with others.

Project Approach and Summary

TRI for Power Plants helps users estimate and report land, air, and water releases for individual units or entire facilities.

TRI for Power Plants helps to satisfy EPA's record keeping requirements by storing annual fuel usage data, as well

as user assumptions, notes, and chemical releases in one facility file. All calculations and assumptions used in the program are fully described in the program documentation. The software is upgraded annually to meet changing reporting requirements and user needs.

In addition to the software and documentation, workshops are held each year to provide user training, discuss future modifications to the software, and provide a forum for interaction among individuals with TRI reporting responsibilities. Webcasts will be scheduled as needed to provide user training and discuss program upgrades.

The software uses a mass balance approach based on fuel input and plant configuration. Fuel inputs include coal, oil, and gas, and alternative fuels. The software incorporates emission factors from EPRI's 2014 Emission Factors Handbook, AP-42 factors for natural gas-fired CTs and reciprocating internal combustion engines (RICE), and fuel composition data from EPRI's Power Plant Toxics Measurements Database. The software calculates emissions of reportable chemicals to air, land, and water, and checks if the TRI reporting thresholds have been exceeded.

Under the fuel basis mass balance methodology, users input facility-specific fuel composition data or can use default data. Emission factors are used to estimate air releases of reportable chemicals, and then the remaining mass is partitioned among solid and liquid waste streams. Users can also add chemicals and input site-specific emission factors for individual fuels or plant units. Sulfuric acid and ammonia releases are estimated based on the coal type burned in the plant and the emissions control device configuration.

The software provides the ability to upload chemical release quantities directly into EPA's TRI-MEweb online reporting system, eliminating the need to enter data manually. Results for non-reportable releases can be stored for internal use. Power producers can also apply TRI for Power Plants to conduct "what if" analyses, such as examining the potential impacts on emissions associated with fuel switching.

Deliverables

- **TRI for Power Plants RY2023 Software:** A single license to the TRI for Power Plants RY2023 software allows the purchaser to install the program on an unlimited number of computers.
- **User's Manual/Other Documentation**
- **Webcasts**
- **Workshops:** User's Group participants may send up to four representatives to project workshops at no additional cost.

Price of Project

The price to participate in this project is as follows: $20,000 for companies with generation capacity less than 5,000 Coal MWe or with no Coal generation, and $28,000 for companies with generation capacity greater than 5,000 Coal MWe.

The TRI for Power Plants software will also be made available at no additional cost to funders of EPRI's Air Quality Assessments and Multimedia Characterization program (P235).

Project Status and Schedule

The software is updated annually to meet changing EPA reporting requirements and user needs. A beta version of the software will be distributed for user review in February 2024. A training workshop or webcast series will be offered in March 2024. The final version of the software will be released in April 2024 to meet the July 1 TRI reporting deadline.

Who Should Join

Participation in this project has proven invaluable to any owner or operator of a coal, gas, or oil-fired power plant who must file annual reports to the EPA TRI program.

Contact Information

For more information, contact the EPRI Customer Assistance Center at 800.313.3774 (askepri@epri.com).

Technical Contacts

Alex Jimenez at 408.310.1856 (ajimenez@epri.com)
Eladio Knipping at 202.293.6343 (eknipping@epri.com)

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EPRI
3420 Hillview Avenue, Palo Alto, California 94304-1338 USA • 800.313.3774 • 650.855.2121 • askepri@epri.com • www.epri.com