

Delaware's Toxics Release Inventory Report for 2016 compiled by DNREC shows overall decrease in state's onsite releases to land, air and water

DOVER – The annual Toxics Release Inventory (TRI) data report from Delaware's industrial facilities as compiled by the Department of Natural Resources and Environmental Control's Emergency Prevention and Response Section continues to show the state's progress in reducing toxic releases into the environment. TRI data from 2016 (the most recent year for which statistics are available) shows a decrease in onsite releases to land, air and water – all as compared to DNREC's 2015 TRI figures.



Explore [TRI data for Delaware](#) from 2012 through 2016.

View the complete [2016 TRI Report](#) (PDF).

Total onsite releases were down 27 percent in Delaware for 2016 – with releases to land down 24 percent, releases to air down 23 percent and releases to water down 27 percent. Onsite releases represent only a very small portion of total TRI reported waste. For 2016, less than 1 percent of the total-

reported TRI waste was released onsite, while 2.7 percent was transferred off-site for treatment or disposal, and 96.5 percent was managed onsite through treatment, energy recovery, and recycling operations by the facilities generating the waste. Total waste for 2016 was down 9 percent compared with 2015.

“The 2016 TRI reporting offers the consensus that Delaware’s manufacturing and industrial facilities continue to keep productivity high while working responsibly with concern for our environment,” said DNREC Secretary Shawn M. Garvin. “The latest TRI data set further confirms that what began almost 15 years as a trend in decreasing toxic releases to our air, land and water has become the rule for the state’s reporting facilities. Today’s TRI reporting is attributable to enhanced technology, industry best practices, regulatory requirements and the public’s expectations for a cleaner environment – expectations which DNREC works every day to meet for protecting public health and preventing environmental risks. However, we must stay vigilant to ensure these trends continue to decrease.”

The major changes impacting the increases and decreases for the year are covered below in the Delaware TRI summary and in greater detail throughout the report. Releases to air, land and water in Delaware are permitted by DNREC under environmental standards at both the national and state level. Permits granted by the department allow for limited discharge of pollutants within these standards that have been established both for protecting the environment and public health.

Please refer to the fact sheet below for background on TRI and a summary of the 2016 TRI data. The full TRI 2016 report and data are available on the Delaware [Emergency Planning and Community Right-to-Know](#) website and on the [Delaware Open Data Portal](#).

Fact Sheet: Delaware Toxics Release Inventory 2016 Data and Report

What is TRI?

The Toxics Release Inventory (TRI) is a publicly available data set containing information reported annually since 1987 for toxic chemicals manufactured, processed, or otherwise used by certain facilities in Delaware and throughout the United States. TRI was established in 1986 under Title III, Section 313, of the Federal Superfund Amendments and Reauthorization Act (SARA 313) to provide information to the public about the presence and release of toxic chemicals in their communities. Title III is also known as the Emergency Planning and Community Right-to-Know Act (EPCRA).

Who must report?

Facilities that are required to report to the government under TRI must meet the following criteria:

1. The facility must be covered under specific listed North American Industry Classification System (NAICS) codes, or be a federal facility. Primarily, these NAICS codes include manufacturing facilities, oil and coal fired electric facilities, and bulk petroleum terminals.
2. The facility must have 10 or more full time employees.
3. The facility must manufacture or process over 25,000 pounds or otherwise use over 10,000 pounds of a TRI chemical. The list of reportable TRI chemicals includes of 595 individual chemicals and 31 chemical categories. Certain chemicals, such as persistent bio-accumulative toxins (PBTs), have lower reporting thresholds.

What is reported?

Facilities submit reports to Delaware's Department of Natural Resources and Environmental Control (DNREC) and the U.S. Environmental Protection Agency (EPA) on the waste management activities for the covered TRI chemicals. These activities include:

1. Direct releases onsite to the environment. These releases are to air, water, and land.
2. Waste managed onsite, which includes recycling, treatment, and energy recovery.
3. Waste managed offsite, which includes recycling, treatment, energy recovery, or disposal.

Data from Delaware facilities is compiled by DNREC and the results are summarized in an annual report. A national analysis of the TRI data is provided by EPA's annual report. It is noteworthy that TRI only requires reporting of releases and waste management activities, but not amounts used. The control of those releases is achieved separately through a variety of DNREC and EPA permits, laws and regulations.

Delaware 2016 TRI Results Summary

For 2016, 59 facilities submitted reports for 85 different chemicals. Approximately 3.4 million pounds were reported as being released on-site, a decrease of 1,223,000 pounds or 27 percent compared to 2015. Of this amount, approximately 22,000 pounds were released to land, while 546,000 pounds were released to air, and approximately 2.8 million pounds were released to water.

Onsite Releases

To Land: The total amount released on-site to land decreased by 7,000 pounds (24 percent) compared to 2015.

- This was primarily the result of the U.S. Army's

National Guard River Road Training Site Range reporting a 68 percent reduction (11,000 pounds) in lead releases to land. This apparent decrease was due to the facility being unaware of a TRI reporting exemption for non-military use of the firing range when they reported for 2015, and they plan to revise their 2015 TRI report for lead downward to reflect this.

- Barium compounds were the top-reported release to land, with almost 100 percent of the 10,000 pounds being released by the Indian River Generating Station.

To Air: The total amount of TRI chemicals reported as released on-site to air for 2016 decreased by 166,000 pounds (23 percent), compared to 2015.

- Reductions in releases to air were reported by several facilities, with the largest being decreased carbonyl sulfide releases to air from Chemours Edge Moor, down 135,000 pounds compared to 2015. This facility didn't file TRI reports for 2016, due to the September 2015 shutdown of operations.
- Though sulfuric acid was reported as the largest release to air at 116,000 pounds, with most of it being released by PBF Energy's Delaware City Refinery, the total figure represented a 109,000-pound (50 percent) reduction by the refinery compared to its 2015 sulfuric acid emissions to air.

To Water: The total amount released onsite to water decreased by 1,050,000 pounds (27 percent) compared to 2015.

- The decrease in releases to water was largely due to a decrease of nitrate compounds releases reported by the Delaware City Refinery, down 914,000 pounds compared to 2015. NO_x is scrubbed out of the refinery's air emissions and diverted to water. Releases of nitrate compounds by the refinery vary from year to year due to many factors, but are primarily due to changes in crude

stock.

- Nitrate compounds were reported as the largest release to water at 2.8 million pounds, with 2.45 million pounds (87 percent) released by the Delaware City Refinery and 318,000 (11 percent) released by Perdue Farms Georgetown.

Offsite Transfers

- Transfers off-site decreased 8 percent, primarily the result of decreases in off-site disposal and energy recovery.
- Largest Change: The largest reduction reported was for offsite disposal of manganese compounds by Chemours Edge Moor, due again to this facility's ceasing operations in September of 2015 – down 865,000 pounds compared to 2015.
- Largest Chemical Reported: Lead compounds were the largest reported chemical amount transferred for offsite recycling at 4.9 million pounds, with 2.9 million pounds reported by the Johnson Controls Battery plant, and 2 million pounds reported by the Johnson Controls Distribution Center, both facilities located in Middletown.

Onsite Management

- Waste managed onsite decreased by 9 percent, due to decreases in onsite treatment and energy recovery.
- Largest Change: Multiple facilities reported decreases of over a million pounds for onsite management compared to 2015. The largest reduction reported was for onsite treatment of hydrogen sulfide by PBF Energy's Delaware City Refinery, with a reduction of 24.4 million pounds compared to 2015.
- Largest Chemical Reported: Hydrogen sulfide was also the largest report chemical amount managed onsite, with 336.5 million pounds being treated onsite, with a

majority of that amount being reported by the Delaware City Refinery.

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