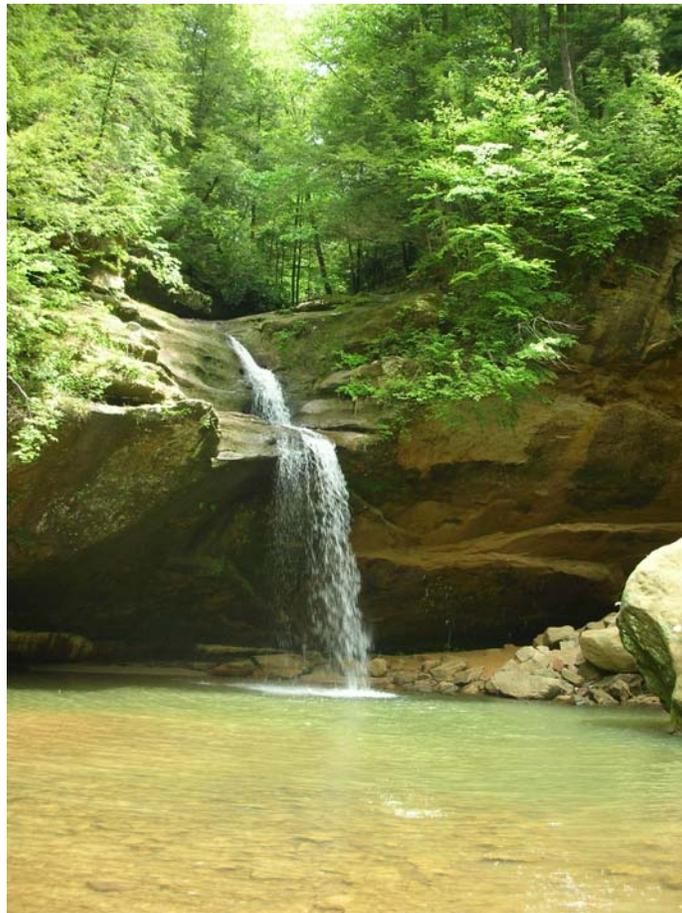




Toxic Release Inventory



2005
Annual Report

Ohio Environmental Protection Agency
Division of Air Pollution Control
May 2007

Executive Summary

Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) provides for the collection and public release of annual Toxic Release Inventory (TRI) reports regarding the release of toxic chemicals within the community. Since the first TRI reports were made available to the public in 1987, TRI has expanded to include information on waste generation, additional reportable chemicals and new industrial sectors (based on Standard Industrial Classification (SIC) codes). The most recent significant expansion, the persistent, bioaccumulative toxic (PBT) chemicals rule, is in effect for its sixth year. Under this rule, the threshold quantities for several chemicals were significantly reduced and other chemicals were reportable under TRI for the first time in 2000. Reporting year 2001 recognized lead and lead compounds as PBT chemicals and, with a few exceptions, reduced the reporting threshold for lead to 100 pounds. This year's chemicals and thresholds remain the same as last year.

For reporting year 2005, Ohio EPA received 5,490 TRI "Form R" reports from 1,604 facilities. While one-third of these facilities reported a single chemical, the average number of chemicals reported was four. Table 1 compares reporting years 2004 and 2005 TRI data for all reporting facilities.

Table 1: Comparison of 2004 and 2005 TRI Data

Comparison	2004 Amount*	2005 Amount	Change
Releases to Air	127,291,556	126,419,513	-0.69%
Releases to Water	8,003,965	6,925,974	-13.5%
Deepwell Injection	22,549,771	24,468,117	8.51%
Releases to Land On-Site	49,719,468	62,536,283	25.78%
Discharges to POTW	18,578,002	19,688,942	5.98%
Off-Site Disposal / Treatment	70,788,896	82,530,299	16.59%
Total Releases and Transfers	296,931,658	310,368,358	4.33%
Energy Recovery On-Site	84,152,450	82,091,319	-2.45%
Energy Recovery Off-Site	35,417,011	35,875,676	1.30%
Recycling On-Site	153,979,455	134,798,507	-12.5%
Recycling Off-Site	145,897,716	144,195,013	-1.17%
Treatment On-Site	379,343,836	338,583,652	-10.7%
Number of Chemicals Reported	304	306	0.6%
Number of Facilities Reporting	1,622	1,604	-1.11%
Number of Form Rs	5,450	5,490	-0.7%
Number of Form As	717	709	-1.1%

* Does not include releases that were transferred off-site to facilities that reported the same chemical under TRI.

Total releases and transfers increased by 4.33% between 2004 and 2005, and with the number of reporting facilities decreasing by 18. Facility increases and decreases are attributable to many factors including changes in production, the types of measurement used, and pollution prevention efforts implemented to minimize releases and to develop uses or find markets for

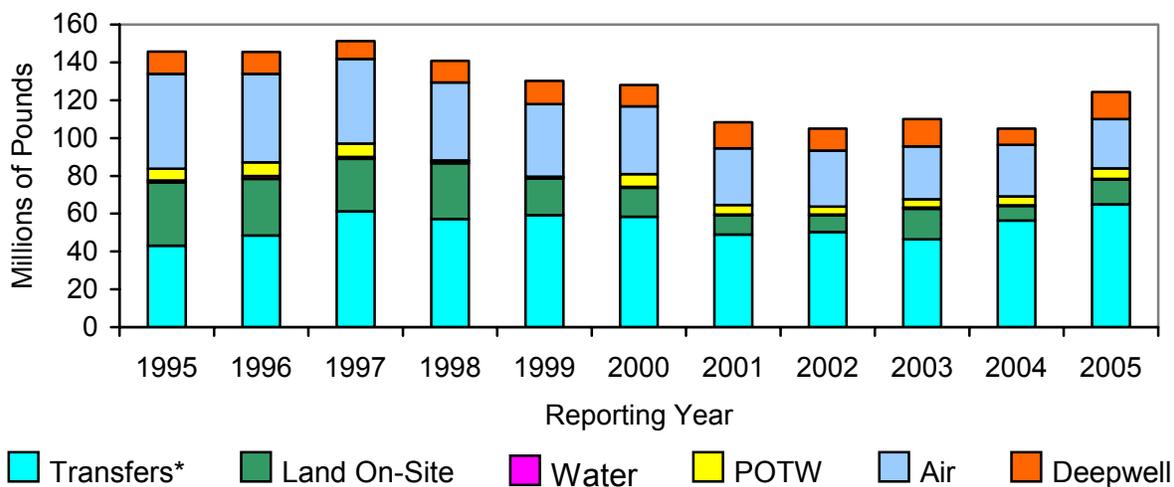
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what might otherwise be a waste. For many Resource Conservation and Recovery Act (RCRA) facilities, which became subject to TRI reporting in 1998, minor waste stream and market changes greatly affect TRI reporting. There are subtle differences in what makes a material a "waste" and whether it is treated, recycled or used for energy recovery.

This report is a summary of the information collected under Ohio's TRI program. New and revised reports are routinely processed by Ohio EPA as facilities perform "self-audits" or otherwise discover errors. Ideally, state and federal TRI data should be the same, as facilities are required to submit TRI reports to both Ohio EPA and U.S. EPA. However, since the state and federal databases are maintained and updated separately, changes are not always made at the same time and some variation is always possible.

Ohio EPA contacted those facilities who reported significant an increase or decrease in waste management or releases between 2004 and 2005 to determine the reasons for the changes. The following information was developed through review of summary data and facility responses, and is included to illustrate how reported releases change each year.

Figure 1: 10-Year TRI Trends
(Original Industries and Chemicals Only)



* - Transfers off-site for disposal and treatment.

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Air Releases

Air releases decreased 0.69%, to 1.26 million pounds, with power plants again reporting the largest TRI releases within the state. Ohio's power generating facilities release primarily hydrochloric and sulfuric acid aerosols, resulting from the combustion of coal. These two chemicals constitute over 60% of all the reported statewide air releases.

The type and quality of coal burned by power generating facilities affect report releases. AEP's Cardinal plant (Jefferson County) reported an increase of 1.2 million pounds. AEP notes that this increase was due to an increase in chloride concentration in their coal supply which resulted in a corresponding increase in emissions of hydrogen chloride. FirstEnergy's Burger plant (Belmont County) and their Eastlake plant (Lake County) increased releases by 600,000 and 800,000 pounds respectively. FirstEnergy attributes this increase to higher production combined with increased use of eastern bituminous coal, resulting in increased hydrochloric, hydrofluoric and sulfuric acid releases. The FirstEnergy's Sammis plant (Jefferson County) reported the largest decrease, reducing air releases by over 1.5 million pounds. FirstEnergy significantly decreased hydrochloric, hydrofluoric and sulfuric acid releases by greater use of western subbituminous coal. Ohio Valley Electric's Kyger Creek Station (Gallia County) reduced releases by 900,000 pounds, attributing the reduction to variation in coal supplies.

Water Releases

Reported releases to Ohio waterways decreased by 13.5%. As in previous years, AK Steel Corporation (Coshocton County) facility reported the largest releases to water, primarily nitrates, up slightly from 3.2 million pounds in 2004 to 3.3 million pounds. However AK Steel's Zanesville facility (Muskingum County) reported a 1.3 million pound decrease in releases. The facility noted that their Number #1 anneal and pickle line was shut down from mid-March through the end of the year due to business conditions. This line generates 90% of facility waste and 50% of facility wastewater.

Ohio TRI reported water releases are primarily nitrate and/or nitrate compounds, mostly through the treatment of nitric acid which results in the manufacturing of the nitrate compounds as a by-product. Nitrate compounds constitute over 85% of all reported water releases and are generally permitted and monitored under the terms of NPDES (National Pollution Discharge Elimination System).

Deepwell Injection

Only two Ohio facilities report deepwell injection - INEOS USA LLC formerly BP Chemicals, in Lima (Allen County) and Vickery Environmental Services in Vickery (Sandusky County). Statewide, reported releases increased 8.51%. Vickery Environmental Services, a Resource Conservation and Recovery Act (RCRA) reporting facility, reported significantly reduced deep-well injection, from approximately 12 to 8 million pounds. The facility noted that this decrease was primarily due to a decrease in the receipt of waste in 2005.

INEOS USA LLC's injection increased approximately 6 million pounds

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due to the increased purity for acetonitrile, which ultimately increased the acetonitrile waste deepwell injected.

Land Releases On-Site

Reported releases to land on-site increased significantly for 2005, increasing by 25.8% from 47.7 million pounds to 62.5 million pounds. Envirosafe Services of Ohio (Lucas County), a RCRA regulated, secure disposal facility, led the State in land releases on-site.

Envirosafe discovered and reported a 20 million pound reporting error for 2004 releases to land on-site. A leading digit, in this instance for the eighth place or tens of millions, had inadvertently been left off the 2004 report. This error affected only the zinc and zinc compound reports. All changes to the 2004 releases have been processed by Ohio EPA TRI and are included.

Among the reporting manufacturing facilities, Millennium Inorganic Chemicals Plants 1 and 2 (Ashtabula County) reported an increase of more than 5 million pounds in 2005. The TRI Program does not require facilities to include materials with a reportable chemical concentration of 1% or 0.1% for carcinogens. This is called the de minimus level. In 2004, Millennium Inorganics was not required to report manganese and manganese compounds because the starting material had a concentration of manganese and manganese compounds below the de minimus level. In 2005, the concentration exceeded the de minimus level and was required to be reported.

Six of the top ten facilities reporting releases to land on-site are power plants. Their releases are related to the amount and the type of coal burned. Dayton Power & Light's JM Stuart station (Adams County) reported an 800,000 pound reduction. The facility attributes this to a 5% reduction in the amount of coal burned combined with use of updated guidance documents for electric utilities which note lower concentrations for most metals, including the barium, manganese and vanadium.

This year, there were three "traditional manufacturing facilities" among the top ten: the two previously mentioned Millennium facilities in Ashtabula County and Eramet located in Marietta (Washington County). Eramet reported releases of 4.1 million pounds, primarily manganese and chromium oxide scrubber sludge and fume dust generated from facility production.

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POTW Releases Reported releases to publicly owned treatment works (POTWs) increased 5.98% up 1.11 million pounds for 2005. The facilities, chemicals, and ranking order were quite similar to 2004 with nitrate compounds and methanol once again reported as the top chemicals. Hamilton County, metropolitan Cincinnati facilities remain among the largest dischargers with Shepherd Chemical, Cognis Corp, Grace Davidson, and PMC Specialties Group reporting releases.

Ohio Precious Metals (Jackson County), reported a 400,000 pound increase. This was due to the neutralization of nitric acid. Alcoa Incorporated (Cuyahoga County) reported a reduction of more than 569,000 pounds of reported POTW releases due to a refinement in their estimation process. In the past the facility used a mass-balance approach. In 2005, the facility initiated pH measurement to estimate the concentration of nitric acid neutralized to generate the nitrate compounds.

Treatment On-Site On-site treatment decreased 10.7% or 41 million pounds and remains the primary waste management activity reported by Ohio facilities. Traditional manufacturing facilities, power generation, and RCRA TSDs all report significant on-site waste treatment.

Millennium Inorganic, Plant 1 (Ashtabula County) and AEP's Gavin Plant (Gallia County) each reported over 50 million pounds (57.5 million and 53.9 million respectively) in on-site treatment.

Millennium Inorganic, Plant 1 reported a 8.3 million pound decrease in on-site treatment attributed to decreases in plant production rate from 2004. AEP's Gavin plant's 4 million pound increase in on-site treatment was the net result in increased ammonia treatment combined with decreases in the treatment of other reportable chemicals. AEP noted that urea is used in the ozone season to reduce emissions of nitrogen oxides. Sunoco (R&M) Haverhill (Scioto County) reported the biggest decrease from 2004, a reduction of 2.4 million pounds, from over 3.2 million pounds to just under 8 million pounds. Sunoco noted that on-site treatment was performed by several control devices as well as the facility waste water treatment plant. Sunoco refined its calculation methodology for 2005, basing the treatment calculation on both inlet and outlet stack test data and the associated production rates.

Off-Site Disposal and Treatment Statewide transfers off-site for disposal and treatment increased 16.59% from 2004 or 11.8 million pounds. A significant portion of this increase was zinc and zinc compounds, up over 6 million pounds, and lead and lead compounds, up over 2 million pounds. These transfers are primarily related to steel production in Ohio. In 2005, the Wheeling-Pittsburgh Steel Corporation's Mingo Junction facility (Jefferson County) led the state, more than doubling off-site transfers for disposal and treatment to 11.6 million pounds. Wheeling-Pittsburgh notes that 2005 was the first complete year of operation of its electric arc furnace and noted that the vast majority of the release is zinc is captured and sent to a landfill. It is

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noted that most of their transfers are to Envirosafe Services in Lucas County.

Transfers for disposal and treatment were also up moderately at ISG Cleveland (Cuyahoga County) from 5.5 million pounds in 2004 to approximately 5.8 million pounds and down for Timken company's Faircrest Steel in Canton (Stark County) to approximately 5.2 million pounds. Timken noted that they were able to increase production by 4.0%, increase on-site dust recycling back through the furnaces by 8% and reduce off site treatment by 2%.

Energy Recovery On-Site

Energy recovery on-site decreased slightly down 2.45%, by 2.06 million pounds. LaFarge North America / Systech Environmental again led the State, reporting 58 million pounds, up slightly from 2004. Systech is a RCRA permitted facility which stores and blends waste for use as fuel in cement kilns. Systech obtains this waste from a variety of generators, brokers and treatment facilities. Significant changes in customers, volume, and composition of waste are routine. Sunoco (R&M) Haverhill (Scioto County) reported a 4.5 million pound decrease in on-site energy recovery. Sunoco notes that the facility conducts on-site energy recovery by combusting waste fuels generated during its manufacturing operations in facility boilers. The facility increased waste fuel sampling in 2005, resulting in a more accurate data set for reporting purposes.

Energy Recovery Off-Site

Statewide energy recovery off-site increased slightly at 1.3% or 0.46 million pounds from 2004. Two RCRA regulated, Treatment, Storage and Disposal (TSD) facilities again led this category. Onyx Environmental Services reported slightly reduced off-site energy recovery, down approximately 100,000 pounds to 6.8 million pounds. Cleveland's Chemical Solvents - Dennison reported an increase in releases of approximately 3 million pounds. This was attributed to increased fuel blending, driven by the market. Dover Chemical Corp. slightly reduced off-site energy recovery by 3.8 million pounds.

Recycling On-Site and Off-site

Statewide on-site recycling showed one of the biggest changes from 2004, decreasing over 19 million pounds, about 12.5%, to over 134 million pounds. Almost 13 million pounds of this decrease is attributed to the closure of Technoglas in Columbus (Franklin County). This subsidiary of Nippon Electric Glass Ltd. made glass TV tubes prior to its September 2004 Chapter 11 bankruptcy and subsequent closure. Hukill Chemical Corp. in Bedford, a RCRA TSD, reported a 6.6 million pound decrease. They attributed this to reduced waste management of xylene. Bailey- PVS Oxides LLC in Delta (Fulton County) reports the most on-site recycling, 27 million pounds of hydrochloric acid, the same as reported in 2004.

Statewide off-site recycling was down slightly, 1.17%, to 144 million pounds. North Star BlueScope Steel reported a decrease of over 5.5 million pounds, significantly more than the net total reduction statewide.

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The facility noted that most of their managed waste is baghouse dust, collected as part of particulate emissions controls for electric arc furnaces. The composition of the scrap metal utilized as a primary raw material varies, thus resulting in a large variation in the waste stream. For 2005, the zinc content in the dust was approximately 8% less than in 2004, resulting in the 5.5 million pound decrease. The facility disposes more than 50 million pounds of dust annually.

PBT Chemicals

The overall releases and transfers for PBT chemicals increased for reporting year 2005 by 28%. Air releases of PBT chemicals decreased by almost 22,496 pounds (22%). Nearly 946 Form Rs for persistent bioaccumulative toxic (PBT) chemicals were submitted for 2005. The PBT chemical list consists of 16 individual chemicals and 4 chemical categories. The chemical categories are dioxin and dioxin-like compounds, lead compounds, mercury compounds and polycyclic aromatic compounds (PACs). The four PBTs with the largest volume of reported releases, transfers and treatment in Ohio for 2005 were, in descending order, lead and/or lead compounds, PACs, mercury and/or mercury compounds, and pendimethalin.

Mercury and/or mercury compounds were reported by 117 facilities in 2005, compared to 115 facilities in 2004. Reporting facilities were in many SIC groups, including power plants, paper mills, steel works, refuse systems, glass manufacturing, and electric light manufacturing.

Nearly 582 reports were submitted for lead and/or lead compounds in 2005, compared to 600 reports for 2004. Lead and/or lead compounds were reported from nearly every major SIC code classification required to report to TRI. Over five million pounds of the lead and lead compounds reported as released or disposed on or off-site were reported by two facilities: EnviroSAFE Services (Lucas County) reported on-site disposal of 2.5 million pounds and Techneglas (Franklin County) reported off-site disposal of 2.9 million pounds sent to Michigan disposal facilities.

Most PACs and the individually listed benzo(g,h,i)perylene are constituents of fossil fuels. Other industrial processes are also sources of PACs, such as hot mix asphalt plants, asphalt roofing manufacturers, iron foundries, primary aluminum producers, coke ovens, pulp mills, Portland cement kilns and carbon black manufacturing. A total of 171 Ohio facilities reported PACs and/or benzo(g,h,i)perylene in 2005.

Dioxin and dioxin-like compounds were reported by 54 facilities, which is 4 facilities less than the number of reporters in 2004. Those industries reporting dioxin and dioxin-like compounds include fossil fueled power plants, paper mills, foundries and petroleum refiners. Small quantities of dioxins are formed as a result of combustion processes, chlorine bleaching of pulp and paper, certain types of chemical manufacturing and processing, and other industrial processes.

Pendimethalin is a selective herbicide used to control most annual

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grasses and certain broadleaf weeds in field corn, potatoes, rice, cotton, soybeans, tobacco, peanuts and sunflowers. It is also used on crops and residential lawns and ornamentals. Animal studies have shown that pendimethalin has a low toxicity. It is slightly toxic if exposure is by ingesting contaminated food or water. It is also toxic if it gets in the eyes. Pendimethalin was reported by three facilities in 2005, two in SIC code 2875 (fertilizers, mixing only), and one in SIC code 3999 (manufacturing industries, not elsewhere classified).

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What's New This Year

Form R Changes

The following information updated the *Reporting Forms and Instructions for Reporting Year 2005* as well as highlights new resources developed by EPA.

- Per the TRI Reporting Forms Modification Rule (39931 Federal Register / Vol. 70, No. 132, Tuesday, July 12, 2005):
 - Sections 4.6,4.8,4.9, and 4.10 in Part 1 have been deleted on Forms R and A;
 - The number of codes used in Form R, Part II, Section 7A, column B (Waste Treatment Method(s) Sequence), have been reduced from 64 to 25;
 - Section 7A, column C (Range of Influent Concentration) of Form R, Part II has been deleted;
 - Facilities are now allowed to report their treatment efficiency as a range instead of an exact percentage in section 7A, column D (Waste Treatment Efficiency Estimate) of Form R, Part II;
 - Section 7A, Column E (Based on Operating Data) of Form R, Part II has been deleted;
 - The number of recycling codes for section 7C (On-Site Recycling Processes) of Form R, Part II have been reduced from 16 to 3;
 - Section 8.11 of Form R, Part II has been modified. TRI-ME users can now use an optional text box to submit information on source reduction, recycling, or pollution control activities; and
- All references to reporting year 2004 and all other date related references have been changed to reflect the current reporting year (i.e., reporting year 2004 has been changed to reporting year 2005; prior year 2003 was changed to prior year 2004, etc.). This change was made for the Form R, Form A Certification Statement, and the instructions.
- See the TRI Home Page at www.epa.gov/tri under "Featured Topics" for information regarding the decision in *Barrick Goldstrike Mines Inc. v. Whitman*.
- Appendix C, "Facility Data Profiles, and Common Errors in Completing Form Reports and Form A Certifications," has been updated.
- The State and Regional contact lists have been updated (Appendices F and G).
- Beginning with Reporting Year 2004, the *de minimis* level for naphthalene has been changed from 1.0% to 0.1% since naphthalene is now classified as an OSHA carcinogen.
- Beginning with Reporting Year 2004, methyl ethyl ketone (CAS number 78-93-3) has been removed from the EPCRA section 313 list of reportable toxic chemicals.

What's New This Year

- U.S.EPA issued final "Burden Reduction" Rules on December 22, 2006. This rule is effective with 2006 reporting, the reports due by July 1, 2007. This change significantly expands the opportunity to file a form "A", raising the eligibility threshold to 5,000 pounds of total waste management, (the sum of column B in section 8). This change also allows the limited use of form As for PBT chemicals other than dioxin. This is only if there are no releases and the total management of the PBT waste stream does not exceed 500 pounds.

Reporting and Updating Latitude/Longitude and Program ID Data in RY 2005.

As part of the TRI Forms Modification Rule, latitude and longitude data (Part I, Section 4.6 of Forms R and A) and Program identification (ID) numbers including RCRA, NPDES and UIC ID numbers (Part 1, Section 4.8, 4.9, and 4.10 of Forms R and A) will no longer be collected by the TRI program. However these data elements will still be part of the TRI data disseminations. TRI data users will obtain these data elements from the Facility Registry System (FRS), EPA's centralized database system for facility information. That system will gather these data elements from existing data, other EPA programs, state and local governments and commercial sources.

If they choose, TRI facilities will still have the ability to review, update and insert latitude and longitude values and Program ID numbers that are being used to represent them. Facilities that use TRI-ME and file their reports over the Internet will be able to do this by signing into the Central Data Exchange (CDX). Links to CDX and this process will also be available to facilities through the electronic Facility Data Profile, the electronic Facility Data Release and on the TRI-ME web page. Facilities may also review and update their latitude and longitude values on the Internet via the Envirofacts FRS Query at:

http://www.epa.gov/enviro/html/fii/fii_query_java.html

Facilities that do not have Internet access will be able to update their latitude and longitude coordinates and Program ID values by contacting the EPA Facility Error Notification/Correction Center at 703-243-8307. Or by mail at:

Lockheed Martin B NEISEC
Error Notification/Correction Center
1010 North Glebe Road
Arlington, VA 22201

Early Public Availability of 2005 TRI Reports.

U.S. EPA has conducted an Electronic Facility Data Release (eFDR) for Reporting Year 2005 forms, making individual forms, as submitted by each facility, publicly available before the traditional annual Public Data Release. This is in response to requests to make the TRI data publicly available earlier. This earlier availability occurred before EPA has completed all the data quality checks, compilations, and trend analysis that are traditionally done as part of the annual Public Data Release. For information on the annual Public Data Release, and the early release of the individual 2005 TRI forms, see the Agency's website:

www.epa.gov/tri/tridata/index.htm

Understanding and Using TRI Information

SARA Overview

The Superfund Amendments and Reauthorization Act, SARA, was passed in 1986. SARA is also known as the Emergency Planning & Community Right to Know Act, or "EPCRA." It was passed in part due to concerns following an incident, which occurred in Bhopal, India. In December, 1984 a methyl isocyanate (MIC) gas leak from a plant operated by Union Carbide India Limited injured or killed thousands of people. SARA required that a chemical emergency response network be expanded to ensure national coverage. State Emergency Response Commissions (SERCs) coordinating with Local Emergency Planning Committees (LEPCs) and local fire departments are responsible for this network. SARA also created or updated four reporting requirements to ensure that chemical storage, use, and release information was available to the potential emergency responders and the community. These reporting programs overlap depending upon whether the materials are "oils," "hazardous chemicals," "hazardous substances," "extremely hazardous substances" (EHSs) or toxic chemicals. Brief explanations of each requirement, including the SARA and enabling Ohio Revised Code (ORC) citations, are listed below.

EHS Notification (SARA 301-303, ORC 3750.02-.05) This notification provision is triggered by storage of one or more EHSs. There are 360 listed EHS chemicals, which are considered immediately dangerous to life or health. Chlorine gas is an example. A specific "threshold planning quantity" (TPQ) is specified for each chemical. TPQs vary, and, while 500 pounds is an approximate average, the TPQ may be as low as one pound. When a facility meets or exceeds the TPQ for a chemical, it must notify the response community (SERC, LEPC and local fire department) and designate contacts and coordinators to pre-plan emergency response activities and serve as emergency contacts. Contact the "Right-To-Know"/SERC Unit in the Division of Air Pollution Control (DAPC), for assistance or for a referral to the appropriate LEPC (614-644-2260).

Emergency Release Notification (SARA 304, ORC 3750.06) Release or spill reporting may be required when there is an offsite release of oil, a hazardous substance, or an extremely hazardous substance. The reporting triggers, known as the "Reportable Quantity" (RQ) vary, ranging from one to 5,000 pounds. The definition of "facility" includes trucks and tankers. Gasoline is included under the definition of "oil" and oil is reportable at 25 gallons or at any quantity entering the waters of the State. Spills or releases should be reported upon discovery to the Ohio EPA/SERC at 1-800-282-9378 or 1-614-224-0946. Hazardous substance spills may require National Response Center reporting. The Ohio EPA Spill Unit of the Division of Emergency and Remedial Response (DERR) can provide additional information (614-644-2080).

Chemical Inventory Reporting (SARA 311-312, ORC 3750.07-.08) The location, quantity, storage conditions and properties of EHSs or "hazardous chemicals" (hazardous due to OSHA hazard communication attributes) must be reported. Such reporting for EHSs is triggered when stored at quantities greater than 500 pounds or the chemical-specific TPQ (whichever is lower). Reporting for hazardous chemicals, a large universe determined by the attributes noted on the Material Safety Data Sheet (MSDS), is triggered by the storage of 10,000 pounds. Like EHS notifications, reports must be submitted to the SERC, LEPC and local fire department.

Ohio SERC forms, Tier II forms, or electronic "Tier2Submit" reporting are used for "inventory reporting" and are due March 1st for the prior calendar year. Contact the

Understanding and Using TRI Information

“Right-To-Know”/SERC Unit in DAPC (614-644-2260), or the appropriate LEPC for assistance.

Toxic Release Inventory Reporting (SARA 313, ORC 3751) Facilities within SIC codes 20-39 and seven other selected non-manufacturing SIC codes with 10 or more employees or equivalent are required to annually report “Form R” or “Form A” information if they manufacture, process or otherwise use any listed chemicals in amounts exceeding the reporting threshold. TRI “toxic” chemicals include 581 individually listed chemicals and 30 chemical categories, including 3 delimited categories containing 58 chemicals, for a total of 666 separate chemicals. Reported TRI information includes chemical use, release, recycling, energy recovery and treatment information, as well as pollution prevention activities at the facility. TRI reporting is on a calendar year basis with reports due July 1st for the prior calendar year. Reported information is readily available from Ohio EPA or U.S. EPA TRI Web sites (see page 28 for Web site information). The Ohio EPA TRI Unit can be contacted at 614-644-2270.

Ohio's TRI Program

In 1988, the Ohio General Assembly passed the Ohio Right-to-Know Act, Substitute Senate Bill 367. This law provided for state implementation of EPCRA. Under this law, Ohio EPA is charged with the administration of Section 313 (Ohio Administrative Code 3745-100). The law gave Ohio EPA authority to enforce Section 313 and established filing fees for covered facilities to support the TRI Program. Ohio EPA’s Division of Air Pollution Control coordinates the TRI Program.

Ohio EPA inspects potential non-reporting facilities each year. Approximately 5% of the inspections result in enforcement actions against facilities, which did not properly file TRI reports.

Who Must Report

Facilities are required to report if they meet all three of the following requirements:

1. Have 10 or more full-time employees (or the equivalent of 20,000 hours worked per year).
2. Are included in the manufacturing facilities in Standard Industrial Classification (SIC) codes 20 through 39 or in any of seven non-manufacturing industrial sectors added on May 1, 1997. The non-manufacturing industrial sectors are: metal mining, coal mining, coal and oil-fired electricity generating facilities, commercial hazardous waste treatment facilities, chemicals and allied products (wholesale), petroleum bulk stations (wholesale), and solvent recovery services. Reports for these non-manufacturing industrial sectors were first filed July 1, 1999, covering calendar year 1998.
3. Manufactured, imported, processed or otherwise used a reportable toxic chemical in quantities exceeding the applicable threshold established by U.S. EPA for that year, chemical and usage. For most reportable chemicals, the thresholds for manufacturing, importing or processing are 25,000 pounds and “otherwise use” is 10,000 pounds. PBT chemicals have notably lower reporting thresholds of 100 pounds or less.

Understanding and Using TRI Information

Facilities, which are defined as “all buildings, equipment, structures, and stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person,” must submit a Form R for each listed chemical used in amounts that exceed the reporting threshold, even if the chemical is not released to the environment.

Facilities using less than one million pounds of a listed toxic chemical in a calendar year and having less than 500 pounds of that toxic chemical as a reportable amount (released to the environment, treated, recycled or used for energy recovery) can file a certification statement (Form A) instead of the more detailed Form R. Form A cannot be used for reporting PBT chemicals.

Reportable Chemicals

The list of reportable toxic chemicals has evolved since the enactment of Section 313. Over 600 toxic chemicals and chemical categories are currently subject to reporting under Section 313. These chemicals vary widely in form (solid, liquid and gas) and in toxicity.

The Administrator of U.S. EPA has the authority to modify the list of chemicals that must be reported. Petitions to add and delete chemicals have been submitted by industry, environmental groups, and the state governors. U.S. EPA evaluates chemicals that may be added or deleted from the list of reportable chemicals. Chemicals are removed from the list because they have not been shown to cause significant adverse human health or environmental effects. The list of reportable chemicals can be obtained from Ohio EPA, U.S. EPA, or on the Internet at <http://www.epa.gov/tri/chemical/index.htm> and select “Current List of TRI Chemicals.”

Chemical Qualifiers

Some TRI reportable chemicals have qualifiers associated with them. Most TRI chemicals are not listed with a qualifier, and are subject to reporting in all forms that they may be manufactured, processed, or otherwise used. TRI reportable chemicals with qualifiers are discussed below:

<u>Chemical</u>	<u>Qualifier</u>
Aluminum	Only fume or dust is reportable.
Aluminum oxide	Only fibrous forms are reportable.
Ammonia (aqueous)	10% of total aqueous ammonia from water dissociable salts and other sources is reportable (100% of anhydrous ammonia is reportable).
Asbestos	Friable forms (can be crumbled or reduced to powder with hand pressure) only.
Chromium compounds	Reportable only if not chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR).
Dioxin and dioxin-like compounds	PBT chemicals reportable if manufactured at the facility or processed or otherwise used when present as contaminants in a chemical but only if they were created during the manufacture of that chemical. Reported in grams instead of pounds (454 grams = 1 pound).

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Chemical	Qualifier
Hydrochloric acid	Acid aerosols only.
Isopropyl alcohol	Reportable only if manufactured by the strong acid process.
Lead and lead compounds	Reportable as a PBT (100 pound threshold) unless contained in a stainless steel, bronze or brass alloy (in which case it is reportable at a 25,000 pound processing threshold).
Nitrate Compounds	Water dissociable; reportable only when in aqueous solution.
Phosphorus	Only the yellow and white forms are reportable.
Saccharin	Only manufacturers must report.
Sulfuric acid	Acid aerosols only.
Vanadium	Only reportable if not an alloy constituent.
Zinc	Only fume or dust is reportable.

TRI Data Uses and Limitations

Users of the TRI data should be aware of the limitations of the data in order to accurately interpret its significance. The TRI data has some significant limitations:

- TRI covers only certain manufacturing and seven non-manufacturing industries. Many other industries release toxic chemicals into the environment. The seven additional non-manufacturing industrial sectors reported for the eighth time on July 1, 2006.
- For reporting year 2005, TRI covers over 600 toxic chemicals and chemical categories. The TRI data does not represent all chemicals used by all industry.
- Releases are reported as total annual releases without reference to frequency or duration. The annual release totals alone are not sufficient to assess the health or environmental impact of the toxic chemicals released.
- The majority of releases are based on estimates. Facilities are required to base releases on monitoring data if it is available. When monitoring data is not available, estimates are used. Estimates result in significant variability among reporting facilities.
- High volume releases of relatively non-toxic chemicals may appear to be a more serious problem than lower volume releases of highly toxic chemicals, when just the opposite may be true. **TRI data summaries must be interpreted with care.**
- The TRI report contains information regarding the release of chemicals, not the public's exposure to the chemicals. Some chemicals break down when exposed to the environment. Some chemicals disperse rapidly when released, eliminating their threat to public health and to the environment. Other highly toxic chemicals may not disperse when released. Disposal of toxic chemicals in underground injection wells does not expose the public since the material is injected thousands of feet below the ground. Also, off-site transfers may not expose the

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community to chemicals. Screening risk assessments must be completed before health and environmental assessments can be made.

- The addition of non-manufacturing industrial sectors can lead to double counting of toxic releases. To calculate total releases and transfers, Ohio EPA identified transfers off-site to a facility, which reported TRI releases of the same chemical, and subtracted the transfer off-site from the total releases. If the off-site location name or permit number did not match a reporting facility, the transfer off-site was included in the total releases and transfers. Inconsistent reporting of facility names can lead to double counting.

Ohio EPA conducts extensive data quality efforts to make every attempt to ensure that the data compiled in this report accurately reflects the data reported by the facilities; however, we acknowledge the possibility of errors due to data entry or problems with the reporting software. Because the TRI data is based on estimates, facilities are encouraged to revise their reports when the estimates are improved.

TRI Rule Changes

While no new rules were applicable for this reporting year, there are proposed rules to simplify and streamline the reporting process and to adopt the North American Industry Classification System (NAICS). NAICS is an industry classification system that could replace the Standard Industrial Classification (SIC) system that has traditionally been used. The following list summarizes significant changes that U.S. EPA has finalized in the past several years.

Federal Register/Date	Title	Summary
66 FR 10585 / February 16, 2001	Lead and Lead Compounds; Lowering of Reporting Thresholds; Delay of Effective Date	Delayed (by 60 days) the effective date of this rule in accordance with the memorandum of January 20, 2001, from the Assistant to the President and Chief of Staff, entitled "Regulatory Review Plan."
66 FR 4500 / January 17, 2001	Lead and Lead Compounds; Lowering of Reporting Thresholds	Lowered reporting thresholds to 100 pounds for lead and all lead compounds except for lead contained in stainless steel, brass, and bronze alloys.
65 FR 39552 / June 26, 2000	Phosphoric Acid	Deleted phosphoric acid from the list of chemicals subject to reporting requirements under TRI.
64 FR 58666 / October 29, 1999	Persistent Bioaccumulative Toxic (PBT) Chemicals; Lowering of Reporting Thresholds for Certain PBT Chemicals; Addition of Certain PBT Chemicals	Lowered the reporting thresholds for certain persistent bioaccumulative toxic (PBT) chemicals subject to TRI reporting. Added a category of dioxin and dioxin-like compounds to the TRI list of toxic chemicals and established a 0.1 gram reporting threshold for the category. Added certain other PBT chemicals to the TRI list of toxic chemicals and established lower reporting thresholds for these chemicals. Removed the fume or dust qualifier from vanadium and added all forms of vanadium with the exception of vanadium when contained in alloys. Also added vanadium compounds to the TRI

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Federal Register/Date	Title	Summary
64 FR 58666 / October 29, 1999 (cont.)	Persistent Bioaccumulative Toxic (PBT) Chemicals; Lowering of Reporting Thresholds for Certain PBT Chemicals; Addition of Certain PBT Chemicals	list of toxic chemicals. However, EPA did not lower the reporting thresholds for either vanadium or vanadium compounds.
63 FR 19838 / April 22, 1998	Deletion of Certain Chemicals	Deleted several chemicals and chemical categories from the list of chemicals subject to reporting. Section 372.65 was amended by deleting the entries for 2-bromo-2- nitropropane-1,3-diol, dimethyldichlorosilane, 2,6-dimethylphenol, methyltrichlorosilane, and trimethylchlorosilane under paragraph (a), and deleting the entire CAS No. entries for 52-51-7, 75-77-4, 75-78-5, 75-79-6, and 576-26-1 under paragraph (b).
62 FR 23834 / May 1, 1997	Addition of Facilities in Certain Industry Sectors; Revised Interpretation of Otherwise Use	Added seven industry groups to the list of facilities subject to TRI reporting requirements. These industry groups are metal mining, coal mining, electric utilities, commercial hazardous waste treatment, chemicals and allied products-wholesale, petroleum bulk terminals and plants-wholesale, and solvent recovery services. Revised the interpretation of the threshold activity, "otherwise use" to include treatment for destruction, disposal, and waste stabilization.
59 FR 61432 / November 30, 1994	Addition of Certain Chemicals	Added 286 chemicals and chemical categories, including 39 chemicals as part of two delineated categories, to the list of reportable toxic chemicals. Addition of these chemicals and chemical categories was based on their acute human health effects, carcinogenicity or other chronic human health effects, and/or their adverse effects on the environment. Reporting for these chemicals and chemical categories was required beginning with the 1995 calendar year.
59 FR 61488 / November 30, 1994	Alternate Threshold for Facilities With Low Annual Reportable Amounts	Allows reporting TRI chemicals on a simplified certification form (Form A) if the amount of the chemical manufactured, processed or otherwise used is not greater than a million pounds and the reportable amount is less than 500 pounds in that year.
70 FR 39931 / July 12, 2005	Toxic Release Inventory Reporting Forms Modification Rule	<p>EPA will no longer require TRI facilities to report locational information (latitude and longitude data) and several facility identifiers (regulatory assigned identification codes for each facility). Instead, the data will be obtained from existing EPA databases and made available to TRI data users. The proposal also:</p> <ul style="list-style-type: none"> • Includes several minor reporting changes related to waste management activities, • Simplifies the reporting of pollution prevention activities, and • Improves public access to information about source reduction and pollution control activities undertaken by some facilities.

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Ohio EPA Programs Related to TRI Chemicals

The availability of TRI data has increased awareness of toxic chemicals within Ohio, and has focused attention on the reduction and management of these chemicals. TRI does not mandate the control of toxic releases or require reduction of the releases of toxic chemical or chemical usage. There are numerous other programs within Ohio EPA that directly impact the management of TRI chemicals through the issuance of permits or through other regulatory or non-regulatory activities. Most releases reported under TRI are regulated through air, water, and/or land disposal permits. The following descriptions provide an understanding of how some of these programs contribute toward reducing TRI releases, waste generation, and the risks associated with toxic chemicals.

Pollution Prevention: Ohio EPA's Office of Compliance Assistance and Pollution Prevention (OCAPP) works with companies on a voluntary, non-regulatory basis to help them modify their operating processes to generate less pollution in a cost-effective and technically feasible manner. OCAPP provides several services to industrial facilities. OCAPP provides free on-site and other types of technical assistance for pollution prevention activities. Copies of hundreds of pollution prevention documents are available upon request or electronically through the Internet at <http://www.epa.state.oh.us/ocapp>. OCAPP provides free assistance with completing pollution prevention plans and provides assistance in identifying and implementing pollution prevention credit projects to mitigate portions of environmental enforcement penalties in conjunction with other Ohio EPA Divisions and the Ohio Attorney General's Office.

Division of Surface Water: Ohio EPA's Division of Surface Water (DSW) regulates industries which discharge toxic chemicals to Publicly Owned Treatment Works or POTWs through its pretreatment program. These industries are regulated by the community if the community has a state-approved pretreatment program, otherwise, Ohio EPA directly regulates these industries. In either case, significant industrial facilities are issued permits which contain discharge limitations as well as requirements for monitoring the waste streams. Noncomplying facilities face enforcement action by either the community or Ohio EPA.

DSW regulates direct surface water point discharges in Ohio primarily through the issuance of National Pollutant Discharge Elimination System (NPDES) permits. Of the approximately 400 pollutants regulated by NPDES permits, 126 have been designated as priority pollutants under the Clean Water Act. Approximately 80 of these are TRI chemicals.

Division of Drinking and Ground Water: Ohio EPA's Division of Drinking and Ground Water (DDAGW) regulates facilities which use underground injection in Ohio. All deep injection wells are permitted and routinely monitored by Ohio EPA. These permits include stringent requirements for monitoring pressures, volumes injected, and mechanical integrity of the wells.

Division of Hazardous Waste Management: Ohio EPA's Division of Hazardous Waste Management (DHWM) regulates generators of hazardous waste and facilities which treat, store, or dispose of such waste. Ohio EPA assigns an identification number to hazardous waste handlers regulated under RCRA. Facilities using a surface impoundment to dispose of TRI chemicals may also fall under the regulations of the Clean Water Act and be regulated by the Division of Surface Water. Not all TRI

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chemicals are considered hazardous under RCRA. Some discharges to land may be considered solid waste, which is not regulated as hazardous. Large quantity generators and facilities that have a permit to treat, store, or dispose of RCRA-regulated waste must submit an Annual Hazardous Waste Report to DHWM.

Division of Air Pollution Control: Ohio EPA's Division of Air Pollution Control (DAPC) regulates new sources of toxic air emissions through the air permitting program. Each potential new source of air toxics undergoes a technical evaluation through which each toxic chemical's potential threat to human health and the environment is reviewed.

Six TRI chemicals are currently regulated under U.S. EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP). They are benzene, asbestos, inorganic arsenic, vinyl chloride, beryllium and mercury. U.S. EPA creates NESHAP emission standards for air pollutants that may pose a serious health hazard on a national level, but are not covered by the National Ambient Air Quality Standards. The National Ambient Air Standards are levels of air quality established by U.S. EPA to protect the public and the environment. These levels have been adopted for ozone, lead, nitrogen dioxide, sulfur dioxide, particulate matter, and carbon monoxide.

The Clean Air Act Amendments of 1990 requires U.S. EPA to regulate 189 additional air toxic chemicals, 173 of which are on the TRI list. U.S. EPA regulates sources of air toxics by issuing maximum achievable control technology (MACT) standards for source categories of these air toxics. U.S. EPA was mandated to issue MACT standards for 40 source categories by November 1992, with all categories covered in 10 years. Ohio EPA has been delegated authority to administer this program in Ohio.

Section 112(r) of the Clean Air Act Amendments of 1990 created a risk management planning (RMP) program. The purpose of these regulations is to prevent accidental releases of regulated substances and to reduce the severity of those releases that do occur. A facility is subject to the regulation if they have any listed regulated substance above a given threshold in a single on-site process. Approximately 500 facilities in Ohio have filed risk management plans since 1999. These plans are updated every five years or as-needed when changes occur at the facility.

TRI Terminology

Chemical Abstracts Service Registry Number (CAS No.) - A numerical identification given to each unique chemical which aids in the identification of a chemical with multiple synonyms (e.g., phenol, CAS No. 108-95-2, is also known as benzenol, carboic acid, hydroxybenzene, izal, monohydroxybenzene, monophenol etc. TRI chemical categories (e.g., zinc compounds) do not have a CAS No. and are assigned category codes by U.S. EPA (e.g., N982 for zinc compounds).

Discharge to Publicly Owned Treatment Works (POTWs) - A POTW is a wastewater treatment facility owned by a public authority such as a municipality or county. Some TRI facilities generate wastewater and discharge it through pipes or sewers to a POTW. At the POTW further treatment of the chemical occurs through biodegradation by microorganisms or removal from the wastewater occurs if the chemical enters the sludge generated during the biodegradation process. Next, the treated wastewater is released to waters of the state. The sludge generated from the process may be incinerated, land-applied, or landfilled. Generally, chemicals that are easily utilized as nutrients by microorganisms, have a low solubility in water,

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or are volatile are treatable by the POTW. Not all TRI chemicals can be treated or removed by a POTW. So POTWs limit the industrial contribution of those pollutants.

Environmental Fate - The disposition, over time, of a chemical in the environment. The bioaccumulation of a chemical in fish or the decomposition of a chemical when exposed to sunlight are examples of environmental fate.

Manufacture - The production, preparation, compounding or importing of a TRI chemical, including the coincidental production of the chemical as an intermediate, by-product or impurity.

Otherwise Use - Any activity involving a TRI chemical that does not fall under the definition of manufacture or process. A chemical that is not intentionally incorporated into a product, like solvents that are used for parts cleaning, falls under the otherwise use category.

PACs – Polycyclic aromatic compounds. There are 21 chemicals that comprise the PAC category. Benzo(g,h,i)perylene, another PAC, is individually listed in the EPCRA list of chemicals. The PAC category is designated as “N590” in the chemical list. Most PACs are constituents of fossil fuels (coal and oil), but also come from other sources such as hot mix asphalt plants and asphalt roofing, iron foundries, coke ovens, primary aluminum producers, pulp mills, cement kilns and carbon black manufacturing. If a facility burns approximately 5000 gallons of No. 6 fuel oil in a year, it would meet the reporting threshold for PACs for that year.

PBTs – In October, 1999, U.S. EPA promulgated the final rule on persistent bioaccumulative toxic chemicals, or PBTs. The PBT chemicals contain several insecticide/pesticides along with the PACs discussed above, lead and mercury and their compounds and dioxin and dioxin-like compounds. For chemicals designated as PBTs, the reporting threshold has been significantly reduced (e.g., from 25,000 pounds to 100 pounds). Other requirements on PBT chemicals help assure accurate reporting of these chemicals (i.e., the de minimis exemption was eliminated, Form R, rather than the simplified Form A must be used, range reporting was eliminated and data can be entered in fractions of a pound).

Process - Preparation of a TRI chemical, after its manufacture, for distribution in commerce. Processing includes intentionally incorporating a chemical into a product or the reaction of a chemical to form another chemical or product.

Quantity Recycled Off-Site - The quantity of toxic chemical that was shipped for recycling, not the amount of chemical recovered at the off-site location.

Quantity Recycled On-Site - The quantity of toxic chemical recovered at the facility that generated it and made available for further uses.

Quantity Treated On-Site - The quantity of toxic chemical destroyed or converted to a chemical that is not reportable under TRI in on-site waste treatment operations.

Quantity Used for Energy Recovery - This is the quantity of toxic chemical that was combusted (on-site or off-site) in some form of energy recovery device, such as a furnace or a boiler. The toxic chemical should have a heating value high enough to sustain combustion. The use of a chemical as a fuel constitutes energy recovery.

Recycle - The process of capturing a useful product from a waste stream. Solvent recovery, metals recovery and acid regeneration are examples of recycling.

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Releases to Air - Releases to air are reported as stack or fugitive emissions. Stack emissions are releases to air that occur through stacks, vents or other confined air streams. Fugitive emissions are releases that are not through a confined air stream. Fugitive emissions include evaporative losses from surface impoundments, spills, and releases from building ventilation systems.

Releases to Land - Releases to land occur within the boundaries of the reporting facility. Releases to land include disposal of toxic chemicals in landfills, land treatment/application farming (in which a waste containing a listed chemical is applied to or incorporated in soil), surface impoundments (uncovered holding areas used to evaporate and/or settle waste materials), and other land disposal methods (such as waste piles).

Releases to Water - Releases to water include discharges to streams, rivers, lakes, and other bodies of water. Releases due to stormwater runoff are also reportable under TRI.

Standard Industrial Classification (SIC) Code - A four-digit code established by the Federal Office of Management and Budget used to describe the type of activities at a facility. The first two digits indicate the major industrial grouping, the last two digits describe a facility activity within in the industrial grouping. For example, a facility with SIC 2813 is grouped within “chemicals and allied products” (28) producing industrial gases. Facilities that engage in a variety of activities may possess multiple SIC codes.

Transfers Off-Site for Treatment and Disposal - Waste transferred off-site for disposal is generally either released to land at an off-site facility or injected underground. Toxic chemicals transferred off-site for treatment may be treated through a variety of methods including neutralization, incineration, and physical separation. These methods result in varying degrees of destruction of the chemical.

Underground or Deepwell Injection - Underground injection is the contained release of a fluid into a subsurface well for the purpose of waste disposal. Class I wells are used to inject liquid hazardous wastes or dispose of industrial and municipal wastewater beneath the lowermost underground source of drinking water.

Summary of Data

In 2005, approximately 322 million pounds of toxic chemicals were reported as having been released to the environment or transferred off-site for treatment or disposal. The data presented for 2005, including the listings of top companies, chemicals and counties, reflects the TRI data reporting due July 1, 2006. The TRI Unit continually reviews this data and works with reporting facilities to assure data quality. Additional and revised data provided subsequent to July 1st has been incorporated into this report to the extent possible considering publication deadlines. Changes to the list of reportable chemicals create difficulties in presenting historical TRI data in an accurate and understandable form. This report presents the data in the following manner:

- Releases for chemicals which were “redefined” were modified in this report to reflect the change if it did not require a case by case evaluation. Non-aerosol forms of hydrochloric acid are no longer reportable. Therefore, only air releases of hydrochloric acid were included in the TRI data presented in this report. Ammonia was “redefined” for calendar year 1994; only 10% of aqueous ammonia is now reportable. Because this change requires a case-by-case evaluation, past years’ data was not modified. Ammonium nitrate was delisted for calendar year 1995. However, the ammonia portion is still reportable and the nitrate portion is reportable as nitrate compounds. Due to the change in the reporting requirement for ammonia in 1994, only ten percent of the ammonia portion of ammonium nitrate was reportable for calendar year 1995. Only ten percent of the ammonia portion of ammonium nitrate was included in the data presented in this report.
- To accurately represent trends in the toxic releases, the chemicals which were added, “redefined” or delisted, and the expansion industries were not included in the calculation of trends for the executive summary and the figures representing trends within this report. Table 2A represents the TRI data as it was reported each year. Table 2B represents the TRI data used to calculate trends. All Phase 1 expansion chemicals, delisted chemicals or “redefined” chemicals, and the expansion industries were excluded from the data in Table 2B, so that the historical trends analysis would reflect true changes in the reported releases and not reflect changes in the reporting requirements.
- Throughout this report, TRI data are referred to as “total releases and transfers.” Total releases and transfers refer to on-site releases to air, water, land; deepwell injection; discharges to POTWs; and off-site transfers for treatment and disposal only. The Pollution Prevention Act of 1990 added the reporting of transfers off-site for recycling and energy recovery. For the purpose of this report, transfers for recycling and energy recovery are grouped separately from transfers for treatment and disposal.
- The addition of hazardous waste treatment facilities, and other non-manufacturing industrial sectors has resulted in the potential to double count releases. Manufacturing facilities report transfers off-site to these non-manufacturing facilities, and, in turn, the non-manufacturing facilities report their releases to the air, water, land and transfers off-site. To calculate total releases and transfers within the state, transfers off-site by manufacturing facilities to facilities which reported the same chemical were not included in the data presented as transfers off-site or total releases and transfers. To calculate county totals, transfers off-site by manufacturing facilities to facilities located in the same county, which reported the same chemical, were not included in the data presented as transfers off-site or total releases and transfers.

Summary of Data

Statewide totals of on-site releases, off-site transfers, and on-site waste management for reporting years 1996 to 2005 are provided in Table 2A and 2B. Table 2A represents all data including the data for delisted, added, and modified chemicals and the expansion industrial sectors. Table 2B does not include data for: (1) chemicals that have been delisted, added or modified; and (2) new industrial sectors which were added to TRI in order to allow for historical trend analysis.

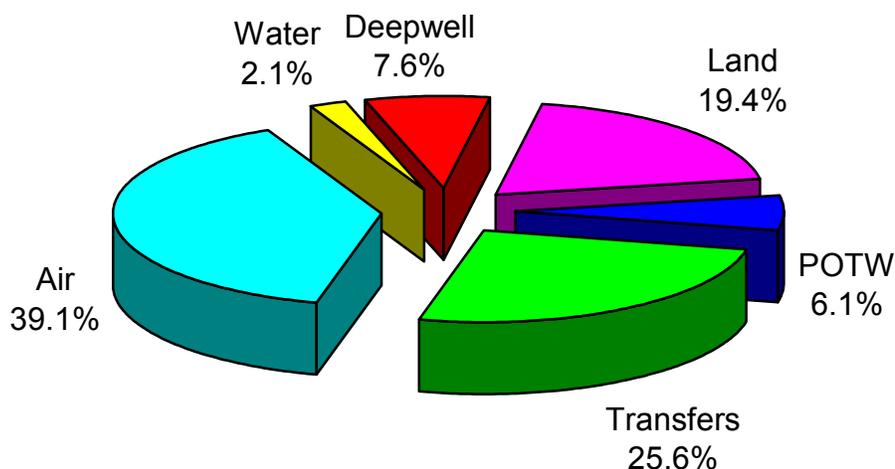
Table 2A: 10-Year-Trend: All Facilities and Chemicals (millions of pounds)

Comparison	1996	1997	1998	1999*	2000	2001	2002	2003	2004	2005
Releases to Air	7.49	70.41	162.57	150.97	145.51	122.11	134.03	132.15	127.29	126.00
Releases to Water	9.42	34.48	9.65	10.33	11.44	10.00	8.85	7.99	8.00	6.93
Deepwell Injection	13.68	11.58	28.77	27.65	30.29	31.99	29.61	29.30	22.55	24.47
Releases to Land On-Site	29.97	27.77	94.22	70.53	76.81	65.62	67.71	67.60	49.72	62.54
Discharges to POTW	18.78	19.20	19.33	19.75	23.11	18.78	17.36	17.32	18.58	19.69
Off-Site Disposal / Treatment	51.14	63.47	77.91	77.26	77.21	83.87	68.38	65.44	70.79	82.53
Total Releases & Transfers**	196.48	226.92	392.44	356.49	364.36	332.38	325.94	319.79	296.93	310.37
Off-Site Energy Recovery	40.75	33.03	101.41	60.04	46.31	40.99	53.82	42.81	35.42	35.88
On-Site Energy Recovery	96.34	107.66	116.97	124.57	94.73	81.03	104.62	81.22	84.15	82.09
Off-Site Recycling	189.09	190.42	190.75	186.93	175.05	172.70	166.49	149.79	145.90	144.20
On-Site Recycling	322.25	215.90	288.52	233.75	223.11	205.55	167.12	171.73	153.98	134.80
On-Site Treatment	151.94	139.45	218.22	262.38	222.17	255.13	271.36	427.00	379.34	338.59
Reporting Facilities	1,654	1,644	1,728	1,734	1,749	1,795	1,728	1,681	1,622	1,604

• - First reporting year for 7 additional industrial sectors.

** Does not include releases that were transferred off-site to facilities that reported the same chemical under TRI.

Figure 2A: 2005 Toxic Releases and Transfers

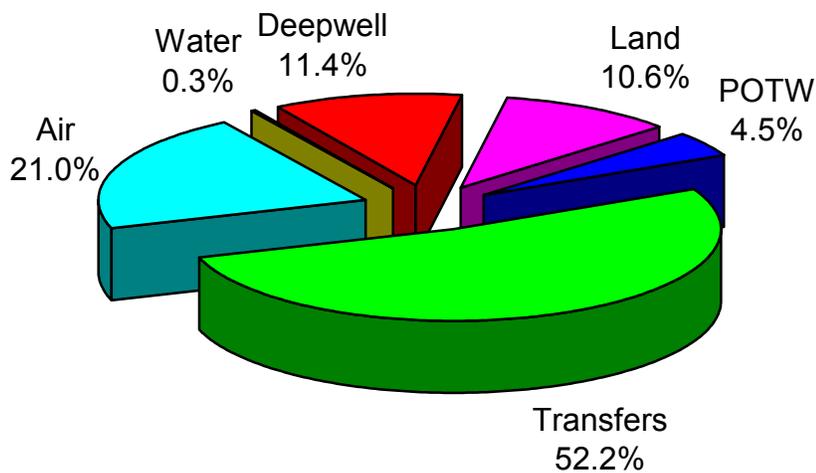


Summary of Data

Table 2B: 10 Year-Trend: Original Facilities and Chemicals (millions of pounds)

Comparison	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Releases to Air	46.8	44.8	41.2	38.4	35.6	30.0	29.5	27.9	27.4	26.1
Releases to Water	1.5	1.0	1.0	0.5	0.5	0.4	0.3	0.6	0.3	0.4
Deepwell Injection	11.6	9.4	11.4	12.3	11.2	13.8	11.6	14.6	8.6	14.2
Releases to Land On-Site	29.9	27.7	29.6	19.3	15.3	10.2	9.0	16.3	7.6	13.1
Discharges to POTW	7.2	7.0	5.9	5.7	6.8	5.1	4.3	4.4	4.7	5.6
Off-Site Disposal / Treatment	48.5	61.3	57.1	59.2	58.4	49.0	50.2	46.4	56.4	64.9
Total Releases & Transfers	145.5	151.2	146.2	135.4	127.7	108.4	105.0	110.1	105.1	124.3
Off-Site Energy Recovery	37.2	29.0	30.7	27.2	24.5	22.2	43.3	20.3	21.9	19.8
On-Site Energy Recovery	83.3	92.0	100.2	100.3	77.0	65.1	84.4	71.9	81.6	79.1
Off-Site Recycling	185.2	185.8	183.2	176.3	167.9	165.7	159.2	142.3	141.0	140.1
On-Site Recycling	295.9	194.2	243.1	181.7	165.2	152.3	129.0	113.3	80.5	66.3
On-Site Treatment	120.5	108.4	108.2	117.8	110.8	100.0	117.1	147.7	149.3	110.8
Reporting Facilities	1,511	1,500	1,490	1,486	1,509	1,567	1,500	1,459	1,404	1,388

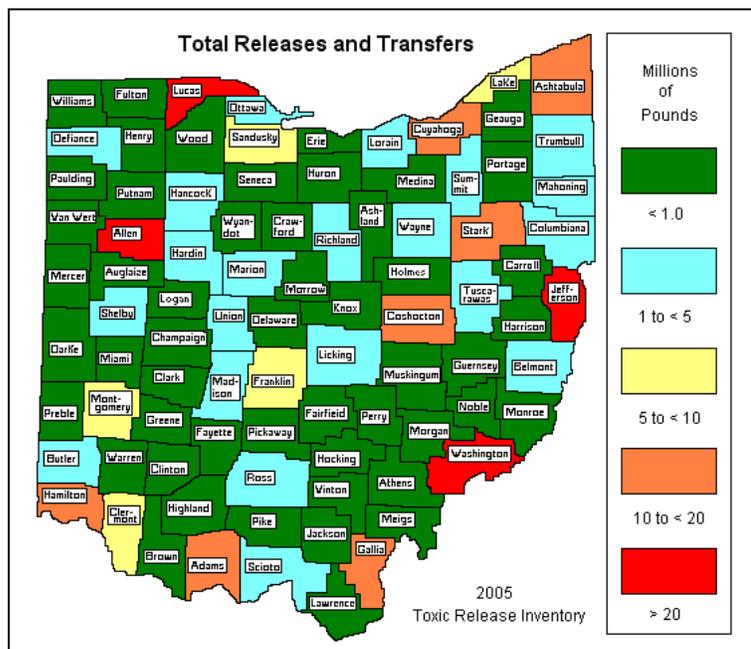
Figure 2B: 2005 Toxic Releases and Transfers



Summary of Data

Total Releases And Transfers For 2005*

Top 10 Counties		
County	Pounds	
1. Lucas	39,149,909	
2. Jefferson	38,180,083	
3. Washington	21,528,292	
4. Allen	21,147,911	
5. Adams	16,899,115	
6. Cuyahoga	16,603,627	
7. Hamilton	16,589,342	
8. Stark	15,097,854	
9. Ashtabula	12,836,681	
10. Gallia	12,769,472	



Top 10 Chemicals

Chemical	Pounds
1. Hydrochloric acid (aerosols)	68,068,925
2. Zinc and zinc compounds	63,647,409
3. Manganese and manganese compounds	27,105,426
4. Nitrate compounds	20,310,317
5. Sulfuric acid (aerosols)	14,547,891
6. Ammonia	14,364,915
7. Methanol	10,697,562
8. Barium and barium compounds	10,176,056
9. Lead and lead compounds	8,786,465
10. Acetonitrile	7,617,440

Top 10 Facilities

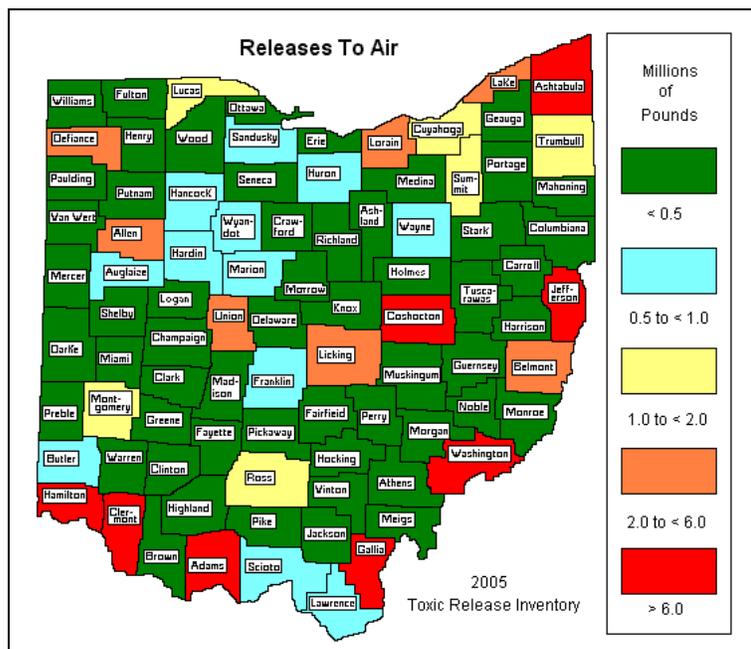
Facility / County	Pounds
1. EnviroSAFE Services of Ohio Inc. / Lucas	34,647,607
2. INEOS USA LLC / Allen	16,756,921
3. DP&L J.M.Stuart Station / Adams	13,287,574
4. AEP - Cardinal Plant / Jefferson	13,196,420
5. FirstEnergy W.H. Sammis Plant / Jefferson	12,794,065
6. Wheeling-Pittsburgh steel Corp. Mingo / Jefferson	11,728,123
7. AEP Muskingum River Plant / Washington	9,191,426
8. Vickery Environmental Inc. / Sandusky	7,969,087
9. American Electric Power Conesville Plant / Coshocton	7,800,127
10. Millennium Inorganic chemicals / Ashtabula	7,496,940

* All data included.

Summary of Data

Releases To Air For 2005*

Top 10 Counties		
County	Pounds	
1. Jefferson	21,544,336	
2. Adams	13,591,063	
3. Washington	11,165,608	
4. Gallia	8,467,193	
5. Ashtabula	7,062,900	
6. Hamilton	6,955,103	
7. Clermont	6,922,950	
8. Coshocton	6,640,680	
9. Lake	5,062,468	
10. Allen	3,545,851	



Top 10 Chemicals

Chemical	Pounds
1. Hydrochloric acid (aerosols)	67,442,002
2. Sulfuric acid (aerosols)	14,395,159
3. Ammonia	9,173,684
4. Carbonyl sulfide	6,634,541
5. Hydrogen fluoride	5,715,413
6. Methanol	2,956,256
7. Certain glycol ethers	2,625,615
8. Xylene (mixed isomers)	2,134,919
9. 1-chloro-1,1-difluoroethane	1,727,728
10. Styrene	1,661,544

Top 10 Facilities

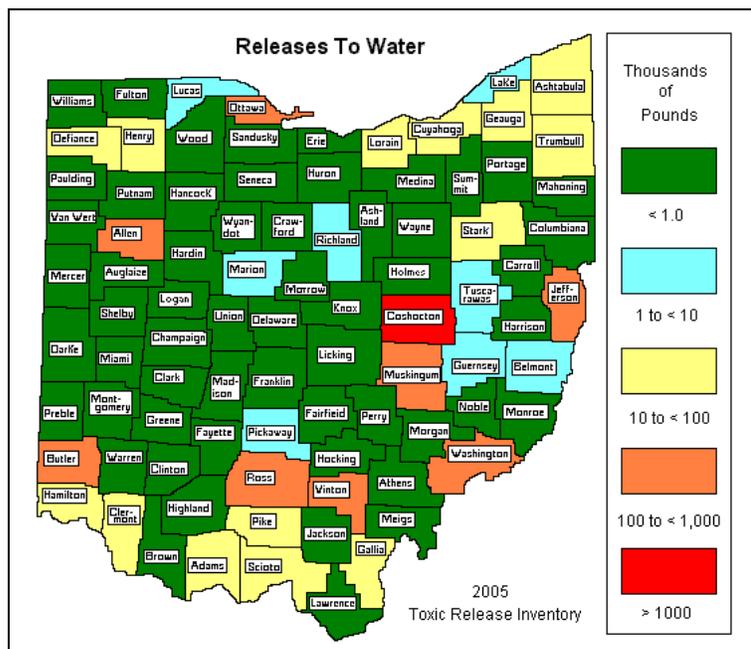
Facility / County	Pounds
1. AEP - Cardinal Plant / Jefferson	11,298,659
2. DP&L J.M.Stuart Station / Adams	10,759,698
3. FirstEnergy W.H. Sammis Plant / Jefferson	10,160,729
4. American Electric Power Muskingum River Plant / Washington	7,853,717
5. American Electric Power Conesville Plant / Coshocton	6,341,453
6. Kyger Creek Station / Gallia	6,068,686
7. Cinergy Corp. Miami Fort Generating Station / Hamilton	5,667,624
8. Cinergy Corp. Beckjord Generating Station / Clermont	5,322,368
9. Millennium Inorganic Chemicals Plant 2 / Ashtabula	4,657,940
10. FirstEnergy Eastlake Plant / Lake	4,182,664

* All data included.

Summary of Data

Releases To Water For 2005*

Top 10 Counties	
County	Pounds
1. Coshocton	3,347,132
2. Ottawa	999,153
3. Washington	631,028
4. Allen	304,838
5. Muskingum	300,503
6. Ross	209,705
7. Vinton	176,922
8. Butler	165,049
9. Jefferson	143,860
10. Scioto	95,429



Top 10 Chemicals

Chemical	Pounds
1. Nitrate compounds	5,964,602
2. Ammonia	361,029
3. Manganese and manganese compounds	234,661
4. Formic acid	86,260
5. Methanol	62,023
6. Zinc and zinc compounds	37,836
7. Barium and barium compounds	35,070
8. Copper and copper compounds	33,400
9. Sodium nitrite	27,400
10. Chromium and chromium compounds	17,822

Top 10 Facilities

Facility / County	Pounds
1. AK Steel Corp. Coshocton Works / Coshocton	3,305,523
2. Brush Wellman Inc. / Ottawa	999,135
3. Kraton Polymers US LLC / Washington	420,207
4. AK Steel Corp. Zanesville Works / Muskingum	300,503
5. PCS Nitrogen of Ohio LP / Allen	222,311
6. Chillicothe Paper Inc. / Ross	209,705
7. Eramet Marietta Inc. / Washington	198,996
8. Sands Hill Coal Co. Inc. / Vinton	171,634
9. AK Steel Corp. / Butler	140,426
10. Titanium Metals Corp. / Jefferson	117,550

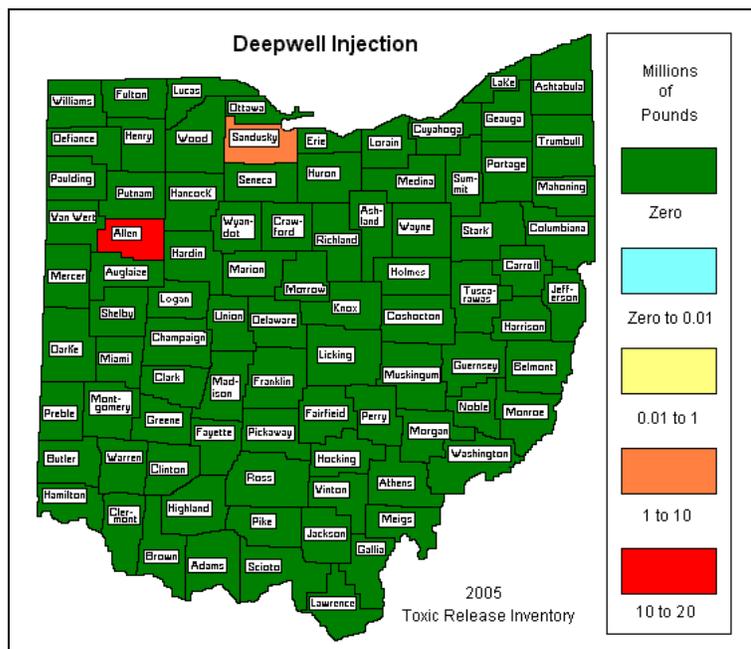
* All data included.

Summary of Data

Deepwell Injection For 2005*

Top 10 Counties	
County	Pounds
1. Allen	16,535,330
2. Sandusky	7,932,787

Note: Only 2 facilities reported on-site deepwell injection.



Top 10 Chemicals	
Chemical	Pounds
1. Acetonitrile	7,600,000
2. Nitric acid	4,498,517
3. Ammonia	1,921,597
4. Acrylamide	1,900,000
5. Methanol	1,800,000
6. Acrylonitrile	1,200,000
7. Hydrogen fluoride	1,193,610
8. Chromium and chromium compounds	834,776
9. Ethylene Glycol	490,427
10. Cyanides	490,000

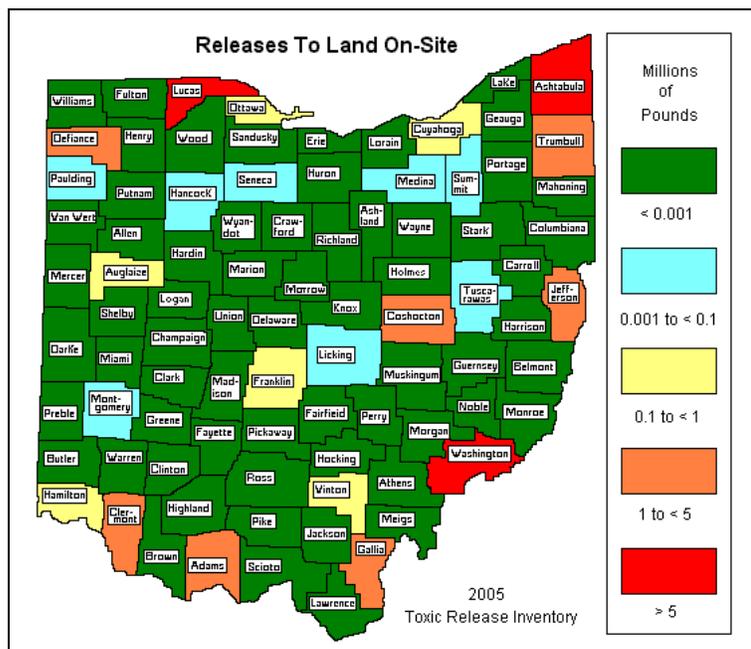
Top 10 Facilities	
Facility / County	Pounds
1. INEOS USA LLC / Allen	16,535,330
2. Vickery Environmental Inc. / Sandusky	7,932,787

* All data included.

Summary of Data

Releases To Land On-Site For 2005*

Top 10 Counties		
County	Pounds	
1. Lucas	35,366,626	
2. Washington	5,430,300	
3. Ashtabula	5,100,448	
4. Gallia	4,276,093	
5. Adams	3,290,671	
6. Jefferson	1,884,850	
7. Coshocton	1,811,714	
8. Clermont	1,372,141	
9. Defiance	1,287,949	
10. Trumbull	1,040,940	



Top 10 Chemicals

Chemical	Pounds
1. Zinc and zinc compounds	30,855,787
2. Manganese and manganese compounds	14,501,598
3. Barium and barium compounds	5,803,378
4. Lead and lead compounds	3,292,335
5. Chromium and chromium compounds	1,979,086
6. Vanadium and vanadium compounds	1,727,135
7. Copper and copper compounds	1,586,341
8. Nickel and nickel compounds	997,259
9. Arsenic and arsenic compounds	536,890
10. Cobalt and cobalt compounds	350,381

Top 10 Facilities

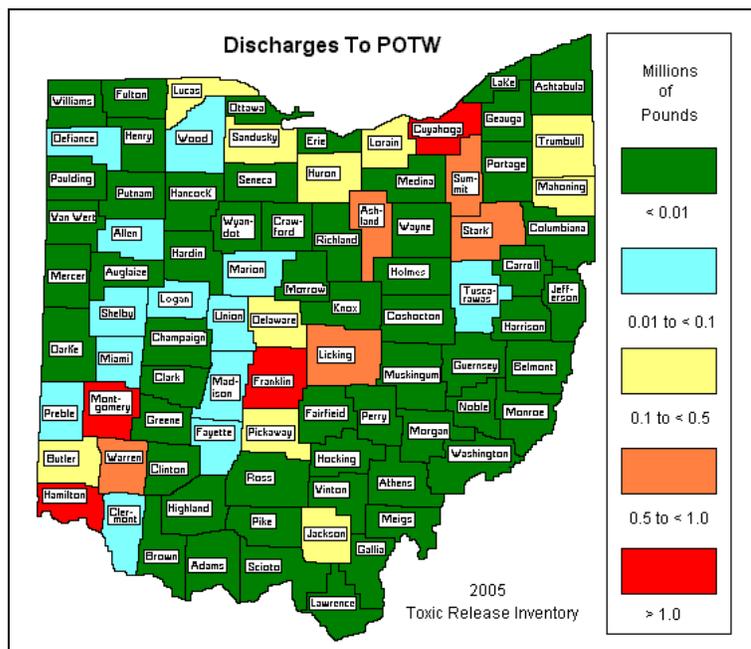
Facility / County	Pounds
1. EnviroSAFE Services of Ohio Inc. / Lucas	34,646,243
2. Eramet Marietta Inc. / Washington	4,105,714
3. American Electric Power Gavin Plant / Gallia	2,984,200
4. Millennium Inorganic Chemicals #2/ Ashtabula	2,800,000
5. Dayton Power & Light Co. J.M Stuart Station / Adams	2,512,274
6. Millennium Inorganic Chemicals #1 / Ashtabula	2,300,187
7. American Electric Power Cardinal Plant / Jefferson	1,884,683
8. American Electric Power Conesville Plant / Coshocton	1,446,147
9. AEP Muskingum River Plant / Washington	1,324,586
10. Kyger Creek Station / Gallia	1,291,893

* All data included.

Summary of Data

Discharges To POTW For 2005*

Top 10 Counties		
County	Pounds	
1. Hamilton	8,228,961	
2. Cuyahoga	1,847,188	
3. Montgomery	1,826,950	
4. Franklin	1,221,787	
5. Stark	824,979	
6. Warren	696,028	
7. Ashland	605,899	
8. Licking	604,223	
9. Summit	542,174	
10. Butler	476,020	



Top 10 Chemicals

Chemical	Pounds
1. Nitrate compounds	13,182,035
2. Methanol	3,011,796
3. Certain glycol ethers	642,670
4. Ammonia	588,173
5. Ethylene glycol	518,884
6. Phenol	216,345
7. Chlorine	190,876
8. Formaldehyde	173,095
9. Sodium nitrite	169,820
10. Allyl alcohol	160,091

Top 10 Facilities

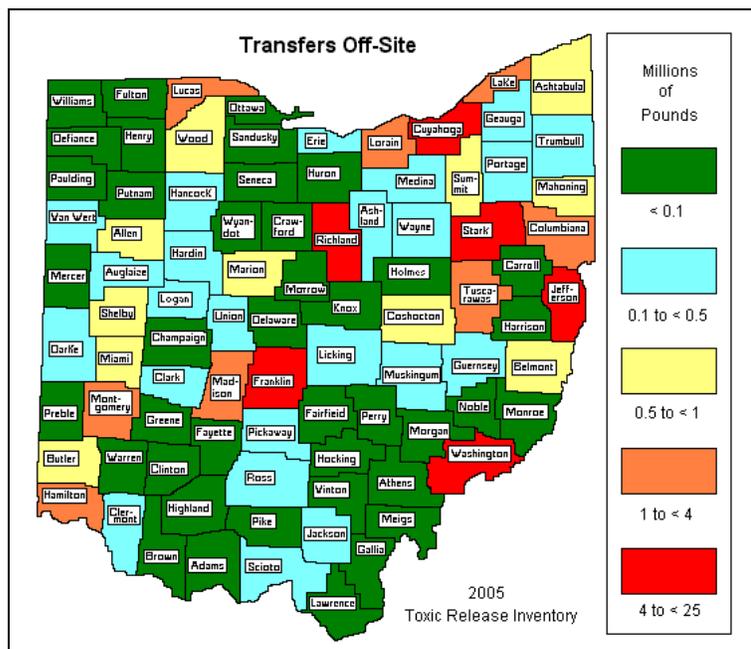
Facility / County	Pounds
1. Shepherd Chemical Co. / Hamilton	3,354,291
2. Cognis Corp. / Hamilton	1,491,628
3. Grace Davidson Cincinnati Plant / Hamilton	1,401,783
4. Cargill Inc. Corn Milling / Montgomery	1,337,810
5. PMC Specialties Group Inc. / Hamilton	978,112
6. GFS Chemicals Inc / Franklin	782,111
7. Sumco Phoenix Corp. / Warren	600,007
8. Tremco Inc. / Ashland	600,000
9. Advanced Energy Technology Inc. / Cuyahoga	506,318
10. Anomatic Corp. / Licking	497,060

* All data included.

Summary of Data

Transfers Off-Site To Disposal or Treatment For 2005*

Top 10 Counties		
County	Pounds	
1. Jefferson	14,607,036	
2. Stark	13,907,377	
3. Cuyahoga	13,223,193	
4. Richland	4,615,394	
5. Washington	4,299,581	
6. Franklin	4,272,509	
7. Montgomery	2,240,531	
8. Lorain	2,050,219	
9. Lake	1,917,240	
10. Lucas	1,899,705	



Top 10 Chemicals		
Chemical	Pounds	
1. Zinc and zinc compounds	32,111,730	
2. Manganese and manganese compounds	11,708,608	
3. Lead and lead compounds	5,424,151	
4. Barium and barium compounds	4,203,250	
5. Chromium and chromium compounds	4,035,850	
6. Methanol	2,867,486	
7. Aluminum (fume or dust)	2,245,398	
8. Copper and Copper Compounds	2,162,889	
9. Ammonia	2,113,438	
10. Nitric Acid	1,951,407	

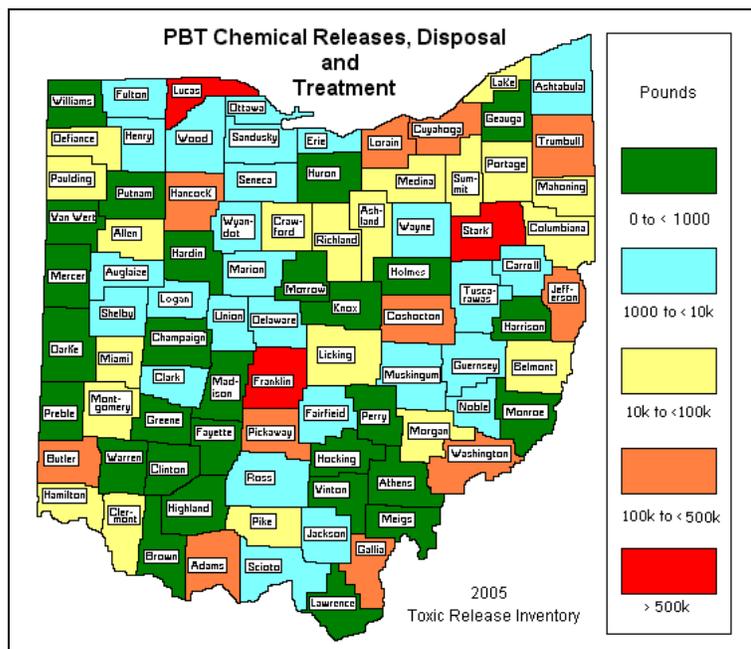
Top 10 Facilities		
Facility / County	Pounds	
1. Wheeling-Pittsburgh Steel Corp. Mingo / Jefferson	11,685,641	
2. ISG Cleveland Inc. / Cuyahoga	5,881,806	
3. Timken Co. Faircrest Steel / Stark	5,254,427	
4. AK Steel Corp. – Mansfield Works / Richland	4,519,900	
5. Envirote of Ohio Inc. / Stark	4,090,006	
6. Energizer Battery Mfg. Inc. / Washington	3,351,097	
7. Timken Co. Harrison Steel / Stark	3,253,058	
8. Techneglas Inc. / Franklin	3,161,734	
9. FirstEnergy W.H. Sammis Plant / Jefferson	2,616,611	
10. Alumitech of Cleveland / Cuyahoga	2,201,786	

* All data included.

Summary of Data

PBT Chemical Releases, Disposal and Treatment For 2005*

Top 10 Counties		
County	Pounds	
1. Franklin	3,032,760	
2. Lucas	2,546,134	
3. Stark	729,534	
4. Jefferson	331,788	
5. Lorain	203,850	
6. Cuyahoga	182,570	
7. Gallia	149,837	
8. Coshocton	148,367	
9. Pickaway	143,126	
10. Butler	139,256	



PBT Chemical Release, Disposal and Treatment Summary†

PBT Chemical	Air	Water	Deepwell Injection	Land	POTW	Off-Site Disposal / Treatment
Aldrin	0	0	0	0	0	0
Benzo(G,H,I)perylene	1,591	126	0	1	5	802
Chlordane	1	0	0	0	0	8
Dioxin & compounds	37.21 gr	0.39 gr	0	212.3 gr	0	181 gr
Heptachlor	0.03	0	0	0	0	218
Hexachlorobenzene	00.05	0	0	0	23	996
Isodrin	0	0	0	0	0	0
Lead & compounds	58,535	3,954	6,066	3,292,336	1,423	5,424,151
Mercury & compounds	10,016	16	0	3,829	36	11,012
Methoxychlor	0.17	0	0	0	0	662
Pendimethalin	43	0.46	0	0	1	9,742
Pentachlorobenzene	118	0	0	0	0	258
PCBs	0	0	0	0	0	187
PACs	9,059	159	209	45	321	30,600
Tetrabromobisphenol A	0	0	0	0	0	0
Toxaphene	0.19	0	0	0	0	22
Trifluralin	289	0.46	0	0	0.25	17

† Quantities rounded to whole numbers, units are pounds unless specified otherwise.

* All data included.

Summary of Data

Releases By Industry

Figure 3 and Table 3 present the TRI releases and transfers by industrial group or Standard Industrial Classification (SIC) codes. Facilities report their SIC code on the Form R or A. Only manufacturing facilities in SIC codes 20 through 39 were initially required to report under TRI. Seven industrial groups within major SIC codes 10, 12, 49, 51 and 73 began reporting in 1998. These are metal mining (10), coal mining (12), coal and oil-fired electricity generating facilities (4911 and 4931), RCRA Subtitle C refuse system facilities (4953), chemicals and allied products (wholesale, 5169), petroleum bulk stations (wholesale, 5171), and solvent recovery services (7389). In addition, federal facilities are required to report to TRI under a presidential executive order. Federal facilities may fall in a variety of SIC codes, both within and outside of the TRI reportable SIC codes. Federal facilities which fall outside of the TRI SIC codes are grouped within "other" in Table 3.

In analyzing releases by manufacturing industry, trends remain fairly constant. The industry groups with the largest quantities of TRI releases and transfers for treatment and disposal in 2005 were those reporting facilities in major SIC code 49 (Electric, Gas, and Sanitary Services) and major SIC code 28 (Chemicals and Allied Products). The reporters in major SIC code 49 are limited to coal or oil fired electric generating plants distributing electric power in commerce (4911 and 4931) and to RCRA Subtitle C refuse systems (4953). The following figure represents the industrial categories and their reported releases and transfers under TRI. (Major SIC code 49 is broken out into electric generating and refuse systems in the figure.)

The industrial sectors most recently added accounted for almost 49% of the releases and transfers for treatment and disposal reported. The electric generating facilities accounted for releases and transfers for treatment and disposal of over 102 million pounds, and the RCRA Subtitle C refuse system facilities accounted for almost 49 million pounds of releases and transfers for treatment and disposal.

Figure 3: Releases & Transfers By SIC

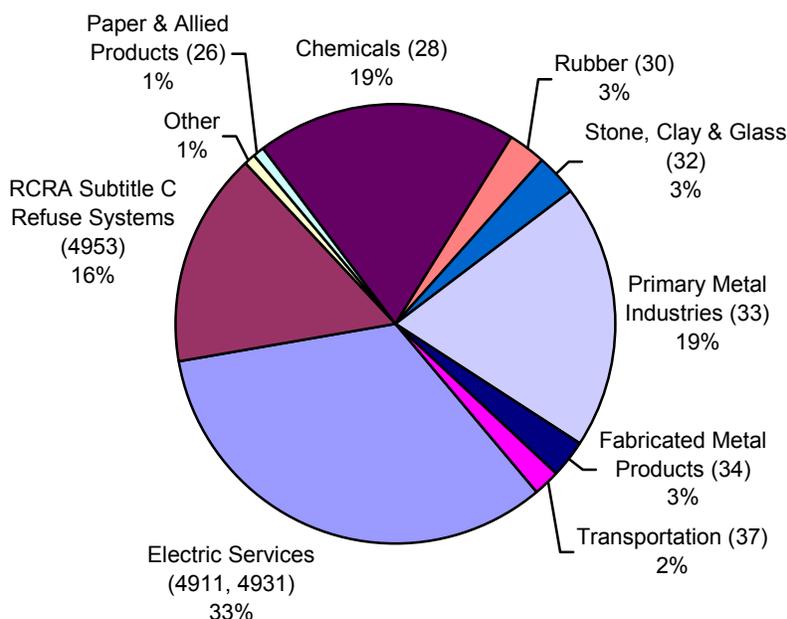


Table 3: Releases and Transfers by SIC Code

SIC Code	Industry Group	Number of Reporting Facilities	Number of Reports	On-Site Releases (Air, Water, Land On-Site and Deepwell Injection)	Discharges to POTW & Transfers Off-Site for Treatment / Disposal	Transfers Off-Site for Energy Recovery & Recycling	On-Site Recycling, Treatment, and Energy Recovery
12	Coal Mining	2	23	351,752	0	0	0
20	Food & Kindred Products	53	107	1,906,283	1,881,970	33,990	2,481,861
22	Textile Mill Products	8	28	116,083	54,459	6,153	209,214
23	Apparel	5	17	69,031	68,595	25,351	85,120
24	Lumber & Wood Products	16	52	231,217	38,081	1,530,548	3,239,235
25	Furniture & Fixtures	5	11	111,172	220,270	6,411	0
26	Paper & Allied Products	28	99	2,549,170	426,384	737,551	24,767,607
27	Printing & Publishing	14	17	62,429	71,470	66,247	340,144
28	Chemicals & Allied Products	249	1,259	36,737,423	22,052,613	27,261,266	195,542,408
29	Petroleum Refining	22	166	1,013,121	628,216	645,673	7,420,356
30	Rubber & Miscellaneous Plastics	204	473	5,583,879	2,453,371	3,641,518	6,468,062
32	Stone, Clay, Glass & Concrete	90	238	4,885,068	4,620,007	636,534	62,622,095
33	Primary Metal Industries	211	767	17,789,664	41,752,812	50,471,655	38,755,685
34	Fabricated Metal Products	266	742	3,245,742	5,824,003	34,704,656	18,685,151
35	Industrial Machinery	86	223	320,192	1,625,319	5,882,334	1,129,528
36	Electronic Equipment	83	177	903,758	2,690,106	12,160,380	6,083,846
37	Transportation Equipment	115	535	3,197,014	2,404,442	22,927,307	3,264,923
38	Instruments and Medical Goods	19	27	22,329	217,041	732,228	146,582
39	Miscellaneous Manufacturing	14	33	92,604	663,627	19,352	128,106
4911 4931	Electric Services (coal and/or oil fired)	27	343	96,356,697	6,480,217	518,367	114,278,993
4953	RCRA Refuse Systems	12	332	42,608,285	6,535,864	12,631,190	50,757,514
51	Wholesale Trade – Chemical and Petroleum Products	51	461	163,798	139,887	2,061,514	12,110,338
73	Business Services	7	66	74,074	1,395,216	3,363,963	6,966,711
-	Other	16	18	1,959,302	0	6,535	0

Summary of Data

Management of TRI Chemicals In Waste

The Pollution Prevention Act (PPA) of 1990 required facilities to report information about the quantities of TRI chemicals in waste managed both on-site and off-site. The PPA established a hierarchy of waste management options in which source reduction is the preferred approach to managing waste. Source reduction is defined as a means of preventing waste from being generated. In situations where source reduction cannot be implemented, the preferred management techniques in order of preference are recycling, energy recovery, and treatment.

The TRI data can be used to analyze trends in total quantities of TRI chemicals in waste to determine if facilities are reducing the amount of waste generated. As reported under TRI, waste falls under one of four categories based upon its final disposition. The first category is releases on-site, which includes releases to air, water, deepwell injection, and land on-site. The second category is discharges to POTWs and transfers off-site for treatment and disposal. The third category is transfers off-site for recycling and energy recovery, and includes waste recycled or used as fuel. The fourth category is waste management on-site, which includes on-site treatment, recycling, and energy recovery. The following figures provide the relative percentages of the total amount of waste generated in these four categories. As illustrated by the pie chart, much of the waste generated never leaves the facility, but is managed on-site through treatment, recycling, or energy recovery. The on-site waste management data, when combined with the amounts released on-site and transferred off-site, is important in understanding the overall annual amount of waste which is generated by a facility.

Figure 4: Management Of Total Waste
(All industries and chemicals)

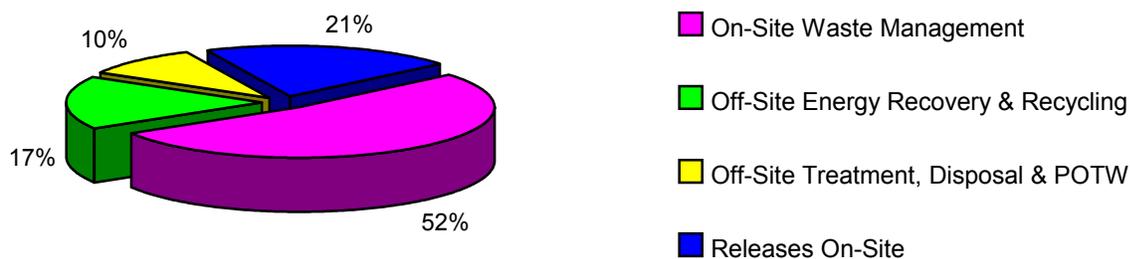
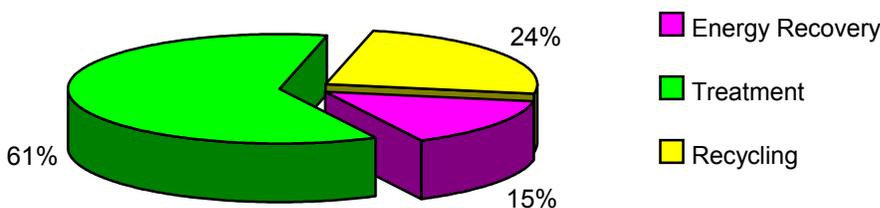


Figure 5: On-Site Waste Management
(All industries and chemicals)



Summary of Data

Nearly 214 facilities implemented source reduction activities at their facility during 2005 for over 503 chemicals. Source reduction means any activity which: (1) reduces the amount of any chemical entering any waste stream or released into the environment prior to recycling, treatment, or disposal; and (2) reduces the hazard to public health and the environment associated with the release(s) of such substances. Source reduction includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. This continued level of source reduction by the reporting facilities demonstrates their commitment to continue to reduce toxic releases beyond environmental regulations.

Facilities also report their production ratios or an activity index for the current reporting year as compared to the prior reporting year. This ratio is to demonstrate the relative (to the prior year) use of a particular toxic chemical. The production ratio (or index) must be based on some variable of production or activity, which reflects the toxic chemical usage. A ratio of 1.1 would indicate a 10% increase in production related to the reported chemical. In 2005, nearly 50% of the TRI reports indicated an increase in production when compared to the data for 2004. Table 4 indicates the changes in production reported by facilities covered by TRI.

Table 4: Changes in Production From 2004 to 2005

Change in Production (Production Ratio)	Number of Form Rs	Percent Reporting
Increase by \geq 30%	637	10.3%
Increase by \geq 20%, less than 30%	275	4.4%
Increase by \geq 10%, less than 20%	603	9.7%
Less than 10% increase	1084	17.4%
No Change	435	7.0%
Less than 10% decrease	859	13.8%
Decrease by \geq 10%, less than 20%	595	9.6%
Decrease by \geq 20%, less than 30%	313	5.0%
Decrease by \geq 30%	349	5.6%
Not applicable, not reported or zero	1066	17.2%

National Perspective

Ohio, a leader in technology and industry, continues to represent a significant portion of the national TRI reporting industries and releases. Table 5 shows Ohio's national ranking for each type of release. The following tables are based on U.S. EPA's national TRI report and data from the March 22, 2007 national data release.

Table 5: Ohio's National Rank

National Rank In:	2003	2004	2005
Air Releases	1	1	1
Water Releases	10	11	14
Land On-Site Releases	10	13	5
Deepwell Injection	3	4	4
Reporting Facilities	1,647	1,608	1,580

Table 6: Number of Reporting Facilities

Number of Reporting Facilities – RY 2005		
Rank	State	Number of Facilities
1	Ohio	1,580*
2	California	1,515
3	Texas	1,493
4	Pennsylvania	1,287
5	Illinois	1,196

* According to Ohio EPA's data the number of reporting facilities is 1604.

Table 7: Top States For Releases

Medium	Rank	State	Release (pounds)
Air	1	Ohio	126,254,635
	2	North Carolina	104,854,619
	3	Georgia	96,824,944
	4	Pennsylvania Texas	85,556,674
	5	Texas	81,999,187
Water	1	Indiana	27,554,609
	2	Nebraska	21,082,285
	3	Texas	17,763,109
	4	Louisiana	11,541,761
	5	Alabama	10,605,294
	14	Ohio	6,943,424
Land On-Site	1	Alaska	528,003,952
	2	Nevada	322,793,943
	3	Utah	160,763,790
	4	Missouri	85,944,990
	5	Ohio	62,536,108
Deepwell Injection	1	Texas	95,529,644
	2	Louisiana	39,740,931
	3	Florida	32,642,829
	4	Ohio	24,466,117
	5	Alaska	17,712,288

Additional Information

Ohio EPA's Division of Air Pollution Control (DAPC) has the primary responsibility in Ohio for collecting, processing, and distributing information submitted under TRI. Additional information not contained in this report is available to the public through the TRI Program located in DAPC.

Ohio TRI Report Access	The reports submitted by facilities are available for review at Ohio EPA's office located at 50 West Town Street in Columbus from 8:00 a.m. to 5:00 p.m. Photocopies are also available.	
Information Requests	TRI staff can take requests by phone to provide information on individual facilities. TRI information can be supplied by fax or by mail as either a hard copy or electronically. Data searches and summaries can also be performed. Call the TRI staff at (614) 644-2270 during business hours.	
U.S. EPA Electronic Facility Data Release (e-FDR) and Public Data Release (PDR)	U.S. EPA's TRI PDR covers information nationwide and provides a good perspective on how Ohio compares to other states. The e-FDR will be available until the PDR is made and gives access to data, on a form-by-form basis, until the PDR is made. Information pertaining to the e-FDR or PDR can be obtained from U.S. EPA via their hotline at 1-800-424-9346 or from the U.S. EPA Web site.	
Web Resources	Ohio EPA TRI	www.epa.state.oh.us/dapc/tri/tri.html
	U.S. EPA TRI	www.epa.gov/tri/
	U.S. EPA TRI Explorer	www.epa.gov/triexplorer
	Toxnet	www.toxnet.nlm.nih.gov
	Envirofacts	www.epa.gov/enviro/index_java.html
	RTK Network	www.rtk.net
	Ohio County Profiles	www.odod.state.oh.us/osr/profiles/
Ohio TRI Program Contacts	Cindy Dewulf	cindy.dewulf@epa.state.oh.us
	Jeff Beattie	Jeff.beattie@epa.state.oh.us
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	Mark Besel	mark.besel@epa.state.oh.us

TRI Related Acronyms

ATSDR	Agency for Toxic Substances and Disease Registry
BACT	Best Available Control Technology
BIF	Boiler and Industrial Furnace
CAA	Clean Air Act
CEM	Continuous Emissions Monitoring
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
EHS	Extremely Hazardous Substance
EIS	Environmental Impact Statement
EIS	Emissions Inventory System
EPA	Environmental Protection Agency
EPCRA	Emergency Planning & Community Right-to-Know Act
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FIFRA	Federal Insecticide, Fungicide & Rodenticide Act
FINDS	Facility Index System
FOIA	Freedom of Information Act
FR	Federal Register
HAP	Hazardous Air Pollutant
HCFC	Hydrochlorofluorocarbon
HMR	Hazardous Materials Regulations
HON	Hazardous Organic NESHAP
HSWA	Hazardous & Solid Waste Amendments - 1984 Amendments to RCRA
LEPC	Local Emergency Planning Committee
MACT	Maximum Achievable Control Technology
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standard
NACEPT	National Advisory Committee on Environmental Policy and Technology
NESHAP	National Emission Standard for Hazardous Air Pollutant
NOx	Abbreviation for oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
PACs	Polycyclic Aromatic Compounds
PAH	Polynuclear Aromatic Hydrocarbon

TRI Related Acronyms

PBT	Persistent Bioaccumulative Toxic chemicals
PCB	Polychlorinated Biphenyls
PEL	Permissible Exposure Limit
PIC	Product of Incomplete Combustion
PM	Particulate Matter
POTW	Publicly Owned Treatment Works
PPA	Pollution Prevention Act of 1990
ppb	Parts per billion
ppm	Parts per million
RCRA	Resource Conservation & Recovery Act
RQ	Reportable Quantity
SARA	Superfund Amendments & Reauthorization Act
SDWA	Safe Drinking Water Act
SERC	State Emergency Response Commission
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAP	Toxic Air Pollutant
THC	Total Hydrocarbons
TITLE III	(SARA) Emergency Planning and Community Right-to-Know Act
TLV	Threshold Limit Value
TPH	Total Petroleum Hydrocarbons
TPQ	Threshold Planning Quantity
TRI	Toxic Release Inventory
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage and Disposal Facility
TSP	Total Suspended Particulates
TWA	Time Weighted Average
UIC	Underground Injection Control
USC	United States Code
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquid
WQM	Water Quality Management