



Toxic Release Inventory

If you have questions about TRI you may [contact us](#).

We're committed to a clean environment



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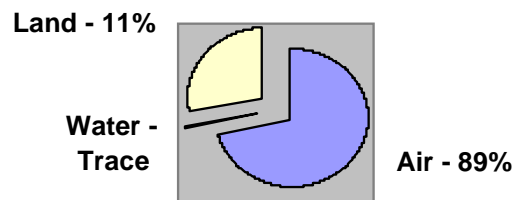
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Summary

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To meet the Environmental Protection Agency (EPA) requirements of providing an accounting for any of the 650 designated chemicals used or released by industrial facilities, Reliant Energy submitted a report in 2006 for the seventh year. This report is for information purposes only.

- Emission inventories are for information purposes only. The Environmental Protection Agency simply requires companies to provide an estimate of certain releases to the environment.
- All Reliant Energy facilities already meet stringent federal and state environmental standards to minimize emissions.
- Reliant Energy already controls air emissions with various technical pollution abatement devices. Currently installed equipment, scrubbers, and mechanical and electrostatic precipitators, capture the majority of releases.
- Of the 650 chemicals listed by the EPA, Reliant Energy facilities meet the inventory reporting criteria for only 20. Of these 20 chemical releases, 10 percent (on average) go into approved landfills. Most of this material is ash that remains from burning coal. According to the EPA, when ash is in the ground, it qualifies as a "release to the environment," even when placed in controlled landfills. Approximately 90 percent of Reliant Energy releases (on average) are to the air. Fifteen of Reliant Energy's 37 plants meet TRI reporting requirements.



After thorough study, the EPA reported to Congress that there is no need to further regulate any of these releases. Coal and fuel oil burning plants generate low-cost reliable electricity for homes and businesses in the Reliant Energy service areas. Burning this fuel releases elements that occur naturally in nature. The EPA, the Electric Power Research Institute (EPRI) and the Harvard Center for Risk Analysis have all concluded that electric industry releases, while large, do not pose any established health risks.

Frequently Asked Questions (FAQ)

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Q. What is TRI?

A. The Toxic Release Inventory (TRI) is a publicly available database of information, which must be reported to satisfy U.S. Environmental Protection Agency (EPA) regulations on the release and transfer of approximately 650 chemicals by private companies and government facilities. Congress created TRI under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The U.S. EPA administers the [TRI program](#), collecting the data and making it available to the public.

Q. Who must file TRI reports?

A. An individual facility must make a report if it meets all of the following criteria:

- It employs the equivalent of 10 or more full time employees.
- It exceeds the reporting threshold by manufacturing or processing at least 25,000 pounds, or otherwise uses at least 10,000 pounds of a listed chemical. Effective for reporting year 2000, the EPA classified certain chemicals as persistent, bioaccumulative and toxic (PBT) and lowered the reporting thresholds for those chemicals to between .1 grams to 100 pounds.
- It falls under specific Standard Industrial Classification (SIC) codes.

Based on these criteria, Reliant Energy submits reports for the [Conemaugh](#), [Keystone](#), [Hunterstown](#), [Portland](#), [Seward](#), [Shawville](#), [Titus](#), [Cheswick](#), [Elrama](#) and [New Castle](#) power plants in Pennsylvania; [Gilbert](#) Power Plant in New Jersey; [Avon Lake](#) and [Niles](#) power plants in Ohio; and for the [Indian River](#) and [Osceola](#) power plants in Florida. TRI reporting for the electric power industry is limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce.

Q. What information is submitted in the TRI report?

A. The TRI report includes the following information for each chemical that exceeds the EPA reporting threshold level:

- Amount released to the air, water, and land.
- Amount shipped offsite for recycling, energy recovery, treatment or disposal.
- Amount recycled, burned for energy recovery, or treated at the facility.
- Chemicals released accidentally, including spills.
- Source reduction activities.
- Environmental permits held.
- Name and telephone number of contact persons.

Q. How useful is the TRI data to the public and employees?

A. The TRI data provides information to the public on the amount of material released or handled annually by industries within the community. However, the TRI data as reported has its limitations. While the total releases are available to the public, the data does not communicate to people their exposure, risk or actual toxicity associated with the releases. The TRI data currently reported can be misleading because it does not:

- Explain that reportable substances released at Reliant Energy facilities are not hazardous to public health at the resultant ground-level concentrations. Actually, there are currently no health-based standards for most of the TRI-reportable pollutants from Reliant Energy facilities.
- Provide information on the progress Reliant Energy has made in reducing releases from coal-fired plants, such as beneficial use of ash products and the installation of air quality and other environmental controls. [Click here to read about how Reliant Energy is reducing releases from power plants.](#) [Click here to see a list of air emission controls at our power plants.](#)

Q. Why are power plant TRI releases so large, and what effect will these quantities have on employees and the public?

A. Providing safe, reliable and affordable electricity to homes and businesses results in air, water and land releases. With today's technology, it is impossible to meet the country's need for electricity without burning coal, which releases some of its original chemical constituents back to the environment. Coal, like other fossil fuels, burns because it contains carbon and hydrogen, which has a high heating value. Coal also contains a small percentage of naturally occurring elements such as oxygen, nitrogen, chlorine, and various minerals (metals). These elements are also present in rocks and soil, as well as in coal.

Due to the size of our facilities and the amount of coal burned, our total releases, as defined by EPA, appear large. However, employees and the public are not exposed to the total releases because a large amount of these "releases" are placed in an engineered and regulatory approved landfill. Furthermore, EPA studies (Reference #2) have concluded that the resulting ground level concentration from releases to air and water are a low risk to human health.

Coal Burned on an Average Day:

<i>Facility</i>	<i>Amount (tons)</i>
Conemaugh	16,100
Keystone	15,200
Shawville	4,300
Avon Lake	4,700
Cheswick	3,800
Elrama	2,900
Portland	2,600
New Castle	2,300
Seward	3,800
Niles	1,500
Titus	1,600

Q. How will TRI emissions from power plants compare to other local sources?

A. Due to the large size of our power plants and the relatively remote counties where many of them are located, the TRI releases from our power plants will undoubtedly exceed many of their industrial neighbors.

Q. Do TRI releases make up a large part of the wastes generated by power plants?

A. TRI releases certainly include most of the total releases for water and waste (primarily ash) releases. TRI releases do not include certain airborne releases, including nitrogen oxides, sulfur oxides, and carbon monoxide, which are regulated by other federal and state programs, primarily the Clean Air Act. Emissions of these pollutants are reported to the Environmental Protection Agency and to the appropriate environmental agencies of the states in which the plants are located.

Q. Are TRI releases legal?

A. Absolutely. Electricity generators are among the most regulated industries in the country in terms of environmental requirements. Power plant releases have been regulated and reported in the past. TRI is simply another layer of environmental reporting to agencies and the public. Accidental spills must be reported as they occur and again under TRI.

Q. What does the industry plan to do about its toxic emissions?

A. Reliant Energy continues to examine ways to reduce releases through technology advancements, product substitution, and recycling. Much has been done in past years to reduce releases and our consideration of such efforts will continue at new power plant acquisitions. As an example of how Reliant Energy recycles, significant quantities of coal ash are sold for use by the concrete industry, rather than placed in landfills.

Q. What pertinent health studies are available?

A. Several major studies relative to health related aspects of power plant operations are readily available and should be examined:

- *EPA Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units - Final Report to Congress* (February 1998). Commonly referred to as the HAPs Report.
- George M. Gray, Ph.D. toxicologist with the Harvard Center for Risk Analysis, recently conducted a comprehensive review of releases from power plants (April 1999). His analysis was that power plants had large releases but little risk.

Q. Are people living near power plants exposed to toxic emissions? Are they in danger?

A. Some of the chemicals released by power plants are listed in the 650 TRI chemicals, and by definition of EPCRA are considered toxic. However, the large volume released is misleading. For example, when it is possible, a large percent of the volume reported under TRI is placed on-site in engineered and regulatory approved landfills. The buried materials are not exposed to the public, so a true "release" has not occurred. Furthermore, EPA studies (Referenc #2) have concluded that the resulting ground level concentration from releases to air, as well as into water are a low risk to human health.

Q. Can you compare the risk from living near a coal plant to other risks?

A. The *EPA Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units* and the *EPRI Electric Utility Trace Substances Synthesis Report* list the following risk comparisons, based on lifetime exposure:

Cancer risk of living near a coal plant	Less than 1 in 1,000,000
Death on the ground from falling aircraft	1 in 250,000 (4 times greater)
Being struck by lightning	1 in 10,000 (100 times greater)
Drowning at home in the bathtub	1 in 10,000 (100 times greater)

Q. What future improvements will be made to reduce emissions? Why don't all units have the most efficient pollution control devices on them?

A. Reliant Energy units generally have emission control equipment installed. When the units were built, state of the art air control technology was installed in the units. We have installed more extensive emission control equipment on many of our units and are evaluating new installations on others. We have installed scrubbers for sulfur dioxide and particulate control at many of our plants. Scrubbers remove 75 percent or more of sulfur dioxide. We are in the process of installing equipment to further control nitrogen oxide emissions at many of our units.

Q. What are you doing to reduce ash emissions?

A. Particulate control devices, such as electrostatic precipitators, are used for all Reliant Energy solid fueled power plants. These devices trap more than 99.9 percent of the ash contained in the exhaust gases.

Q. If ash is a waste, why is it used to build public roads or make concrete to build houses or schools?

A. Ash is a mixture of many naturally occurring elements and compounds. Long-term independent studies by the American Coal Ash Association (Reference #4) have proven that coal ash is equivalent to, or better than, other materials used in the cement making process. The studies prove that any traces of metals that may be present in the ash are permanently locked in the concrete once it has set. The Environmental Protection Agency reiterated in May 2003 that fly ash is a non-hazardous material. Ash materials, in fact, have also been designated as co-products when used in various recycling and reuse activities, such as concrete production and road construction.

Q. Why don't you recycle all of your ash instead of placing it in landfills?

A. We recycle all of the ash we generate that can be productively used. We market all of the bottom ash from the [Seward](#) and [Portland](#) stations in Pennsylvania. In addition, we have an active coal ash-marketing program that seeks to develop new markets and expand existing markets.

Q. Do you report mercury?

A. Yes, we report [mercury](#) at a plant site if more than 10 pounds is handled during the year.

Q. Do you report dioxin?

A. Yes, we report [dioxin](#) and dioxin-like compounds if more than 0.1 gram is handled at a plant site.

Q. Can we use the TRI facility ranking as an "environmental scorecard"?

A. It would be inappropriate to consider the TRI facility ranking as an environmental scorecard since it does not consider the relative hazards, health risks, or the public exposure of each listing. For instance, high levels of one release could actually be less hazardous than a small quantity of another release. The TRI releases must be further analyzed to assess risk to public health when considering the flaws noted above.

Glossary

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Acid Rain - Occurs when emissions of sulfur dioxide (SO₂) and oxides of nitrogen (NO_x) react in the atmosphere with water, oxygen, and oxidants to form various acidic compounds. These compounds then fall to the earth in either dry form (such as gas and particles) or wet form (such as rain, snow, and fog).

Ammonia - Is naturally present in coal in trace amounts. It can be injected to aid in pollution abatement. Coal- and oil-based power plants use it to reduce emissions such as nitrogen oxides from flue gas leaving the stacks. This controls the release of nitrogen oxides. It is added to water with other chemicals to prevent against corrosion in cooling towers.

Antimony and Antimony Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Antimony resides in materials that are sold, retained on-site or in controlled off-site disposal areas.

Arsenic and Arsenic Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Arsenic resides in materials that are retained on-site or sold.

Ash - The residue that remains after coal has been burned.

Barium and Barium Compounds - Are naturally present in coal and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Barium resides in materials that are retained on-site or sold. Barium compounds represent the largest single TRI land component from most coal-fired power plants.

Benzo (g,h,i) perylene - See PBTs

Beryllium and Beryllium Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Beryllium resides in materials that are retained on-site or sold.

Bioaccumulate - To store a substance over time within an organism. Substances that bioaccumulate tend not to break down and dissipate.

Boiler - A large furnace in which water is heated into pressurized steam.

Chromium and Chromium Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Chromium resides in materials that are retained on-site or sold.

Coal - A black substance composed of carbon and minerals that is mined from the earth and used as fuel.

Cobalt and Cobalt Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Cobalt resides in materials that are retained on-site or sold.

Combustion - The process of burning.

Combustion Gases - Byproducts of burning fossil fuels, including carbon dioxide - which has been linked to the notion of [global warming](#) - water vapor, nitrogen oxides, sulfur dioxide and carbon monoxide.

Copper and Copper Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Copper resides in materials that are retained on-site or sold.

Dioxin and dioxin-like compounds - Unintentional byproduct formed by the incineration of certain chlorinated chemicals. The Environmental Protection Agency classifies dioxin as persistent, bioaccumulative and toxic (PBT).

EI - [Edison Electric Institute](#).

EPA - [The U.S. Environmental Protection Agency](#).

EPCRA - [The Emergency Planning and Community Right-to-Know Act](#).

EPRI - [The Electric Power Research Institute](#).

Exhaust Gas - Gas that is left over after fuel is burned.

Form R Report - The form used for TRI reporting.

Fossil Fuel - The fuel used in combustion, including coal, lignite, fuel oil or natural gas.

Fuel Oil - A petroleum product that is used as a fuel.

Generator - A machine that produces electricity or other energy.

Global Warming - A theoretical warming of the earth's atmosphere brought on by a buildup of carbon dioxide and other gases. Many industrial processes emit these gases.

Hexachlorobenzene - See PBTs.

Hydrogen Chloride (HCl) - Is created in gaseous form when inorganic chlorides that occur naturally in coal and oil are burned during the combustion process. Many power plants will release a large amount of hydrochloric acid aerosols. HCl will be emitted primarily to the air.

Hydrogen Fluoride (HF) - Is created in gaseous form when inorganic fluorides that occur naturally in coal are burned during the combustion process. Approximately 90 percent of the fluorides in coal are released as HF through power plant stacks. HF will be emitted primarily to the air.

Landfill - A permitted subsurface storage area that contains ash from the combustion process.

Lead - Is naturally present in coal and oil, and collects in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Lead resides in materials that are retained on-site or sold.

Manganese and Manganese Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Manganese resides in materials that are retained on-site or sold.

Mercury - A metal that is naturally present in the earth's crust and in fossil fuels. EPA classifies mercury as a persistent, bioaccumulative and toxic (PBT) chemical.

Metals - A compound of the fossil fuel that is largely captured by the air pollution control equipment and placed in the landfill.

Naphthalene - It is found as an organic compound or constituent that is an impurity in the Residual Fuel Oil used in the combustion process to generate electricity. It is released to the air in very small amounts as a byproduct of incomplete combustion.

Nickel and Nickel Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Nickel resides in materials that are retained on-site or sold.

Ozone - A form of oxygen when near the ground is a component of smog. At high altitudes ozone is beneficial because it filters UV rays from the sun.

PAC - Polycyclic aromatic compounds are present in trace amounts in coal and fuel oil. EPA classifies them as persistent, bioaccumulative and toxic (PBT) chemicals.

Particle - A type of air release generally composed of ash.

PBT - Persistent, bioaccumulative and toxic.

Persistent, bioaccumulative toxics (PBTs) - A group of chemicals that tend to persist in the environment and accumulate in animal tissue. PBTs common to utility facilities include **benzo (g,h,i) perylene; vanadium and vanadium compounds; dioxin and dioxin-like compounds; and hexachlorobenzene.**

Plume - The combustion gases exiting from a stack.

Release - An emission to the environment, primarily to a landfill (waste release) or from a stack (air release).

Scrubber - An environmental control device used to remove sulfur dioxide and other materials from the combustion gases.

Selenium and Selenium Compounds - Are naturally present in coal and oil, and collect in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Selenium resides in materials that are retained on-site or sold.

Sulfur dioxide (SO₂) - A component of gas that is formed by the combustion of fuel containing sulfur.

Stack - The chimney at a power plant through which combustion gases pass.

Sulfuric Acid (H₂SO₄) - Is created in gaseous form when sulfur that occurs naturally in coal and oil is burned during the combustion process. Electric generating plants will report H₂SO₄ as an air release.

Thallium - Is naturally present in coal, and collects in bottom ash, fly ash, slag and flue gas emission-control waste during and after the combustion process. Thallium resides in materials that are retained on-site or sold.

TRI - Toxic Release Inventory. An annual report of chemical releases required by specific industrial sources.

Turbine - A device that uses steam, water flow, fossil fuel, or wind to cause a spinning motion that activates electromagnetic forces and generates electricity.

Utility - An entity that provides a public service, such as the electric, gas, or telephone company.

Vanadium and Vanadium Compounds - Is naturally present in coal and collects in bottom ash, fly ash and slag, as well as flue gas emission - control waste during and after the combustion process. Vanadium resides in materials that are sold, retained on-site, or in controlled off-site disposal areas. The EPA classifies Vanadium and Vanadium Compounds as persistent, bioaccumulative and toxic (PBT) chemical.

Zinc and Zinc Compounds - Are naturally present in coal, and collect in bottom ash, fly ash, slag and flue gas or emission-control waste during and after the combustion process. Zinc resides in materials that are sold, retained on-site, or in controlled off-site disposal areas.

Perspective on Chemicals

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CHEMICAL	DESCRIPTION	COMMON USAGE
Antimony	Silvery-white metal found in earth's crust. Mineral arrives as trace element in coal.	Metal alloys, Solder, Sheet & pipe metal
Arsenic	Gray brittle metal-like substance in soil and rocks. Mineral arrives as trace element in coal.	Wood preservatives, Agricultural products, Electronics, Glass
Barium	Silvery-white metal found in earth's crust. Mineral arrives as trace element in coal.	Paints, Bricks, Tiles, Glass, Rubber, Fuel additives, Certain medical tests
Benzo (g,h,i) perylene	A PAC that occurs in oil, coal, wood, and natural gas as a result of incomplete combustion. Sources include wood-burning stoves, automobile exhaust, cigarette smoke, and power plants.	None
Beryllium	Hard, grayish metal found in mineral rocks, coal, and soil. Mineral arrives as trace element in coal.	Electrical parts, Machine parts, Ceramics, Mirrors
Chromium	Gray, solid material in rocks, animals, plants, and volcanic dust. Mineral arrives as trace element in coal.	Cement Plating, Metal fabrication, Asbestos-lined brakes, Catalytic converters
Cobalt	Steel gray, shiny hard metal in pure form found in rocks, soil, and streams. Mineral arrives as trace element in coal.	Component of Vitamin B, Superalloys, Porcelain enamel, Artificial joints
Copper	Either dark green crystals (copper acetate) or yellow to brown powder (copper chloride) Mineral arrives as trace element in coal.	Fungicide, Catalyst Pigment, Mildew preventative, Corrosion inhibitor, Shark repellent
Dioxin	Colorless solids or crystals in pure form. Dioxins are an unused byproduct formed when fuel is combusted in the presence of chlorine, including utility boilers, forest fires, and volcanoes.	None. Dioxin production as a commercial product has been banned in the U.S. since the 1970s.
Hydrogen Chloride (HCl)	Slightly yellow gas with a pungent, irritating odor. Chlorides arrive as trace element in coal. HCl is formed during coal combustion.	Iron and steel fabrication, Clean and electroplate metals, Etch circuit boards, Make solvents and dyes, Chloride salts
Hydrogen Fluoride (HF)	Colorless gas. Fluorides arrive as trace element in coal. HF is formed during coal combustion.	Metal fabrication, Etching circuit boards, Glass Stain removers, Pharmaceuticals
Lead	Bluish-gray metal found in soil and water. Mineral arrives as trace element in coal.	Roofing, X-ray shields, Ammunition, Batteries, Metal products
Manganese	Silver-colored metal found in soil, rocks and water. Mineral arrives as trace element in coal.	Steel, Dry-cell batteries, Matches, Fireworks, Porcelain
Molybdenum Trioxide	White or yellow to slightly bluish powder or granules. Mineral arrives as trace element in coal.	Alloys, Fertilizers
Mercury	Silver-colored metal found in soil and streams that is liquid at room temperature. Mineral arrives as trace element in coal.	Thermometers, Fluorescent lights, Batteries, Dental fillings
Nickel	Hard, silvery-white metal in pure state. Mineral arrives as trace element in coal.	Metal coins, Stainless steel, Jewelry, Valves, Heat exchangers

CHEMICAL	DESCRIPTION	COMMON USAGE
Polycyclic Aromatic Compounds (PACs)	A category of chemicals that form during incomplete burning of fossil fuel, garbage and organic materials.	None.
Selenium	Amorphous or crystalline red to gray solid common in earth's crust. Mineral arrives as trace element in coal.	Anti-dandruff shampoos, Photography development, Pigments, Veterinary medicine
Sulfuric Acid	Clear, colorless, oily and odorless liquid. Sulfur is present in coal and combines with oxygen and hydrogen during combustion.	Battery acid, Phosphate fertilizer, Parchment paper, Metal galvanizing, Die casting, Wood preservatives
Thallium	Bluish-white metal in pure form found in earth's crust. Mineral arrives as trace element in coal.	Metal alloys
Vanadium	White-to gray metal found in nature, often occurring as crystals. Found in earth's crust, rocks, some iron ores, and crude petroleum deposits. No odor in pure form.	Primarily steel, but also automobile parts, springs, ball bearings, aircraft engines, rubber, plastics and ceramics.
Zinc	White colorless crystals. Mineral arrives as trace element in coal.	Metal galvanizing, Die casting, Wood preservatives, Golf balls, Fuel additive

References

1. EPRI (1994) *Electric Utility Trace Substances Report*, EPRI TR-104614
2. USEPA (1998) *Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units – Final Report to Congress*, EPA-453/R-98-004a
3. Harvard Center for Risk Analysis (1999) *Toxic Pollution from Power Plants: Large Emissions, Little Risk in Risk in Perspective*, Vol. 7 Issue 2
4. ACAA Proceedings (2003) *15th International American Coal Symposium on Management & Use of Coal Combustion Products*, St. Petersburg, Florida



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Summary of 2005 TRI Releases

Reliant Energy -- Avon Lake Power Plant (Ohio)

CHEMICAL	AIR	WATER	LANDFILL	TOTAL RELEASES
Arsenic Compounds	616	6	45,092	45,714
Barium Compounds	311	23	164,666	165,000
Chromium	396	6	43,501	43,903
Copper Compounds	161	4	32,281	32,446
Dioxin and Dioxin-like Compounds (grams)	0.28	NA	NA	0.28
Hydrochloric Acid (aerosol)	1,467,024	NA	NA	1,467,024
Hydrogen Fluoride	94,541	NA	NA	94,541
Lead Compounds	622.67	2.49	18,055.75	18,680.91
Manganese Compounds	752	6	46,168	46,926
Mercury Compounds	321.97	0.04	273.24	595.25
Nickel Compounds	423	5	35,692	36,120
Polycyclic Aromatic Compounds	NR	NR	NR	NR
Sulfuric Acid (aerosol)	278,326	NA	NA	278,326
Vanadium	215	9	62,519	62,743
Zinc Compounds	637	6	41,681	42,324
Total (Pounds)	1,844,346.64	67.53	489,928.99	2,334,343.16
Percentage by category	79%	0%	21%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported
 NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Cheswick Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	LANDFILL	SURFACE IMPOUNDMENT	TOTAL RELEASES
Ammonia	1,420	NA	NA	NA	1,420
Arsenic Compounds	489	10	32,485	0	32,984
Barium Compounds	671	33	112,468	0	113,172
Chromium	309	9	31,187	0	31,505
Copper Compounds	205	7	23,013	0	23,225
Dioxin and Dioxin-like Compounds (grams)	0.21	NA	NA	NA	0.21
Hydrochloric Acid (aerosol)	2,013,920	NA	NA	NA	2,013,920
Hydrogen Fluoride	190,160	NA	NA	NA	190,160
Lead Compounds	503.73	3.89	13,062.38	0.00	13,570
Manganese Compounds	589	10	32,911	0	33,510
Mercury Compounds	180.04	0.04	136.42	0.00	316.5
Nickel Compounds	327	8	26,049	0	26,384
Sulfuric Acid (aerosol)	473,420	NA	NA	NA	473,420
Vanadium	396	13	44,447	0	44,856
Zinc Compounds	831	9	30,224	0	31,064
Total (Pounds)	2,683,420.77	102.93	345,982.8	0	3,029,506.5
Percentage by category	88.6%	0%	11.4%	0%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Conemaugh Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON-SITE LANDFILL	TOTAL RELEASES
Ammonia	10,900	1,100	0.0	12,000
Arsenic Compounds	2,011	655	130,000	132,666
Barium Compounds	541	1,651	270,000	272,192
Chromium Compounds	NR	NR	NR	NR
Cobalt Compounds	481	850	17,000	18,331
Copper Compounds	436	450	76,000	76,886
Dioxin and Dioxin-like Compounds (grams)	0.91	NA	NA	0.91
Hydrochloric Acid (aerosol)	680,005	NA	NA	680,005
Hydrogen Fluoride	68,005	NA	NA	68,005
Lead Compounds	2,029	66.4	24,483.4	26,578.8
Manganese Compounds	2,403	41,000	760,000	803,403
Mercury Compounds	500.2	6.5	1,738.9	2,245.6
Nickel Compounds	1,402	1,740	38,000	41,142
Selenium Compounds	3,501	411	11,000	14,912
Sulfuric Acid (aerosol)	670,005	NA	NA	670,005
Thallium Compounds	NR	NR	NR	NR
Vanadium Compounds	661	0	290,000	290,661
Zinc Compounds	2,305	3,500	70,000	75,805
Totals (Pounds)	1,445,185.2	51,429.9	1,688,222.3	3,184,837.4
Percentage by category	45%	2%	53%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Elrama Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	OFF-SITE LANDFILL	SURFACE IMPOUNDMENT	TOTAL RELEASES
Ammonia	1	NA	NA	NA	1
Arsenic Compounds	311	11	0	0	322
Barium Compounds	635	29	0	0	664
Chromium Compounds	198	10	0	0	208
Copper Compounds	NA	NA	NA	NA	NA
Dioxin and Dioxin-like Compounds (grams)	0.15	NA	NA	NA	0.15
Hydrochloric Acid (aerosol)	185,180	NA	NA	NA	185,180
Hydrogen Fluoride	65,660	NA	NA	NA	65,660
Lead Compounds	315.92	4.25	0.00	0.00	320.17
Mercury	47.23	0.07	0.00	0.00	47.30
Manganese Compounds	369	8	0	0	377
Nickel Compounds	214	8	0	0	222
Sulfuric Acid (aerosol)	54,199	NA	NA	NA	54,199
Vanadium Compounds	391	14	0	0	405
Zinc Compounds	676	9	0	0	685
Total (Pounds)	308,197.15	93.32	0	0	308,290.47
Percentage by category	100%	0%	0%	0%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

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NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Gilbert Power Plant (New Jersey)

CHEMICAL	AIR	WATER	LANDFILL	TOTAL RELEASES
PACs	26.7	NA	NA	26.7
Totals (Pounds)	26.7	NA	NA	26.7
Percentage by category	100%	0%	0%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Hunterstown Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	LANDFILL	TOTAL RELEASES
Ammonia	1,405	NA	NA	1,405
Totals (Pounds)	1,405	NA	NA	1,405
Percentage by category	100%	NA	NA	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Indian River Power Plant (Florida)

CHEMICAL	AIR	WATER	OFF-SITE TRANSFERS	TOTAL RELEASES
Lead	106	4	16	126
Mercury	NA	NA	NA	NA
Naphthalene	59	0	840	899
Nickel Compounds	3,967	39	2,000	6,006
PACs	0.78	0	315.79	316.57
Vanadium	1,494	126	4,322	5,942
Sulfuric Acid	140,227	0	0	140,227
Totals (Pounds)	145,853.78	169	7,493.79	153,516.57
Percentage by category	95%	0.1%	4.9%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Keystone Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON-SITE LANDFILL	TOTAL RELEASES
Ammonia	151,000	3,600	0	154,600
Arsenic Compounds	2,116	342	150,000	152,458
Barium Compounds	2,315	3,108	140,000	145,423
Chromium Compounds	1,304	111	39,000	40,415
Copper Compounds	837	27	61,000	61,864
Dioxin and Dioxin-like Compounds (grams)	0.9561	NA	NA	0.9561
Hydrochloric Acid (aerosol)	16,000,005	NA	NA	16,000,005
Hydrogen Fluoride	1,300,005	NA	NA	1,300,005
Lead Compounds	2,126.5	18.7	31,958.3	34,103.5
Manganese Compounds	2,508	13,014	41,000	56,522
Mercury Compounds	1,370.3	0.0	1,367.9	2,738.2
Nickel Compounds	1,403	311	27,000	28,714
PACs	6.1	0.0	0.0	6.1
Sulfuric Acid (aerosol)	1,000,005	NA	NA	1,000,005
Vanadium Compounds	1,928	0	310,000	311,928
Zinc Compounds	4,308	201	72,000	76,509
Totals (Pounds)	18,471,236.9	20,732.7	873,326.2	19,365,295.8
Percentage by category	95%	0%	5%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

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NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- New Castle Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	LANDFILL	SURFACE IMPOUNDMENT	TOTAL RELEASES
Arsenic Compounds	253	3	22,245	1,124	23,625
Barium Compounds	191	8	60,875	3,075	64,149
Chromium Compounds	172	3	20,139	1,017	21,331
Dioxin and Dioxin-like Compounds (grams)	0.11	NA	NA	NA	0.11
Hydrochloric Acid (aerosol)	907,700	NA	NA	NA	907,700
Hydrogen Fluoride	85,700	NA	NA	NA	85,700
Lead Compounds	265.26	1.18	8,865.15	447.82	9,579.41
Manganese Compounds	311	2	18,455	932	19,700
Mercury	200.10	0.02	167.90	8.48	376.5
Nickel Compounds	NA	NA	NA	NA	NA
Sulfuric Acid (aerosol)	116,120	NA	NA	NA	116,120
Vanadium Compounds	151	4	28,593	1,444	30,192
Zinc Compounds	455	3	19,979	1,009	21,446
Total (Pounds)	1,111,518.36	24.2	179,319.05	9057.3	1,299,918.91
Percentage by category	85.5%	0%	13.8%	0.7%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

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NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Niles Power Plant (Ohio)

CHEMICAL	AIR	WATER	LANDFILL	SURFACE IMPOUNDMENT	TOTAL RELEASES
Ammonia	8,137	5,351	NA	NA	13,488
Barium Compounds	32	19	17,223	0	17,274
Dioxin and Dioxin-like Compounds (grams)	NR	NA	NA	NA	NA
Hydrochloric Acid (aerosol)	338,114	NA	NA	NA	338,114
Hydrogen Fluoride	34,201	NA	NA	NA	34,201
Lead Compounds	200.03	31.83	2,836.57	0.00	3,068.43
Manganese Compounds	NR	NR	NR	NR	NR
Mercury Compounds	142.79	0.04	150.50	0.00	293.33
Sulfuric Acid (aerosol)	94,177	NA	NA	NA	94,177
Vanadium	42	10	9,269	0	9,321
Total (Pounds)	475,045.82	5,411.87	29,479.07	0	509,936.76
Percentage by category	93%	1%	6%	0%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy – Osceola Power Plant (Florida)

CHEMICAL	AIR	WATER	LANDFILL	TOTAL RELEASES
Polycyclic Aromatic Compounds	0.074	0	0	0.074
Totals (Pounds)	0.074	0	0	0.074
Percentage by category	100%	0	0	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Portland Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON/OFF-SITE LANDFILL	TOTAL RELEASES
Barium	642	220	24,000	24,862
Dioxin and Dioxin-like Compounds (grams)	0.211	NA	NA	0.211
Hydrochloric Acid (aerosol)	2,600,005	NA	NA	2,600,005
Hydrogen Fluoride	230,005	NA	NA	230,005
Lead	371.9	4.8	1,559.9	1,936.6
Mercury compounds	131	0.1	202.0	333.1
PACs	28.4	NA	NA	28.4
Sulfuric Acid (aerosol)	160,005	NA	NA	160,005
Vanadium Compounds	780	NA	35,000	35,780
Totals (Pounds)	2,991,968.3	224.9	60,761.9	3,052,955.1
Percentage by category	98%	0%	2%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Seward Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON/OFF-SITE LANDFILL	TOTAL RELEASES
Ammonia	7,780	NA	NA	7,780
Arsenic	1,103	1	0	1,104
Barium Compounds	13	3	0.00	16
Chromium Compounds	703	1	0.00	704
Copper Compounds	30	1	0.00	31
Dioxin and Dioxin-like Compounds (grams)	0.24	NA	NA	0.24
Hydrochloric Acid (aerosol)	900	NA	NA	900
Hydrogen Fluoride	120	NA	NA	120
Lead Compounds	141.33	0.46	0.00	141.79
Manganese Compounds	1,325	1,384	0.00	2,709
Mercury Compounds	4.11	0.04	0.00	4.15
Nickel Compounds	763	83	0.00	846
PACs	3.02	NR	NR	3.02
Sulfuric Acid (aerosol)	203	NA	NA	203
Vanadium compounds	16	1	0.00	17
Totals (Pounds)	13,104.46	1,474.5	0	14,578.96
Percentage by category	90%	10%	0%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Shawville Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON/OFF-SITE LANDFILL	TOTAL RELEASES
Ammonia	28,100	1,500	NA	29,600
Arsenic Compounds	596	9	74,000	74,605
Barium Compounds	484	180	160,000	160,664
Dioxin and Dioxin-like Compounds (grams)	0.258	NA	NA	0.258
Hydrochloric Acid (aerosol)	2,700,005	NA	NA	2,700,005
Hydrogen Fluoride	240,005	NA	NA	240,005
Lead Compounds	597.2	1.6	10,370.6	10,969.4
Mercury	691.1	0.2	841.5	1,532.8
Sulfuric Acid (aerosol)	270,005	NA	NA	270,005
Vanadium Compounds	481	NA	110,000	110,481
Zinc Compounds	1,005	174	23,000	24,179
Totals (Pounds)	3,241,969.3	1,864.8	378,212.1	3,622,046.2
Percentage by category	90%	0%	10%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year

Summary of 2005 TRI Releases

Reliant Energy -- Titus Power Plant (Pennsylvania)

CHEMICAL	AIR	WATER	ON/OFF-SITE LANDFILL	TOTAL RELEASES
Copper Compounds	124	4,700	37	4,861
Dioxins and Dioxin-like Compounds (grams)	0.11	NA	NA	0.11
Hydrochloric Acid (aerosol)	1,500,005	NA	NA	1,500,005
Hydrogen Fluoride	130,005	NA	NA	130,005
Lead Compounds	227.8	10.5	5.1	243.4
Manganese Compounds	284	684	180	1,148
Mercury Compounds	84.2	0.6	1.1	85.9
Sulfuric Acid (aerosol)	22,005	NA	NA	22,005
Vanadium Compounds	326	NA	600	926
Zinc Compounds	590	171	42	803
Totals (Pounds)	1,653,651	5,566.1	865.2	1,660,082.3
Percentage by category	99.6%	0.3%	0.1%	100%

Note: Total releases are rounded to two significant digits. All units are in pounds, except for Dioxin and Dioxin-like compounds, which are expressed in grams. 1 pound = 454 grams; 1 gram = 0.0022 pounds

NA – Reportable in this calendar year, but no releases reported

NR – Not Reportable in this calendar year