

Reworld (Covanta) Trash Incinerator & Environmental Racism in Chester

Chester area residents suffer from high rates of health problems – problems that are caused and made worse by high levels of industrial air pollution.

Chester’s #1 air polluter – and #1 environmental law violator – is Reworld Delaware Valley (formerly named Covanta), the nation’s largest waste incinerator, burning up to 3,500 tons of waste every day. This trash comes from throughout Delaware County, Philadelphia, New York City, New Jersey, and beyond. Only about 1.6% of the trash burned at Covanta is from the City of Chester.

Burning trash does not turn it into energy. Every ton burned turns into toxic ash and air emissions. Covanta is missing two of the four pollution control systems that most incinerators have. They have no controls for the nitrogen oxides (NOx) that triggers asthma attacks, and no controls for the highly toxic dioxins and mercury they release. After 35 years of operation, Reworld finally installed the missing controls for NOx, which only reduced their emissions of this one pollutant by about 6% so far. If they were required to meet modern standards, they’d have to reduce this asthma-triggering pollution by 70-80%. The incinerator is still the county’s #1 industrial source of NOx pollution.



Environmental racism – Toxic industries like trash incinerators disproportionately impact people of color. Of the 20 largest trash incinerators in the United States, 70% of them are in communities of color.¹

The most polluting option – Covanta’s toxic ash is dumped in Delaware County’s Rolling Hills Landfill in a rural community an hour north of Chester. This ash is more dangerous in a landfill than putting trash in the landfill directly. Incineration (and landfilling ash) is more harmful to people’s health than simply landfilling it. Incineration is also far dirtier than burning coal, which everyone knows is a filthy fuel.²

What is the alternative? – Redesigning products, reducing consumption and packaging, reusing things, recycling, and composting (collectively known as “zero waste”) is the ultimate answer, and employs more people with safer, green jobs. As we work to build these solutions, it’s urgent that we end incineration and go directly to landfilling instead of burning waste first and landfilling ash, which is far more harmful for all.

In 2023, as a result of our collective advocacy, the Delaware County Solid Waste Authority started diverting trash away from the incinerator. 14% of Delco's trash now skips the incinerator on its way to the landfill. However, 28% of the trash they burn in Chester still comes from Delco, which is unacceptable. These 326,000 tons/year of Delco trash need to be reduced to zero as soon as possible, by actually reducing waste, but also by skipping the incinerator as fast as possible. Energy Justice Network has been working to stop Covanta and all incinerators since the 1990s, and is the nation’s leading group providing support to communities to end incineration. We’re making progress to end incineration in Delco. You can help speed up the transition from this outdated practice to a reuse, recycling and composting economy. Join us! www.energyjustice.net/join

¹ www.energyjustice.net/incineration/ej

² www.energyjustice.net/incineration/



How polluting is the Covanta/Reworld trash incinerator in Chester?

The “Reworld Delaware Valley” incinerator in the City of Chester, PA is the [largest](#) waste incinerator in the United States, operating with the [fewest](#) pollution control devices. Based on [data](#) reported to the PA Department of Environmental Protection, the incinerator is the #1 industrial air polluter in Delaware County, releasing more pounds of health-damaging air pollution than any other facility.

Pollutant (in pounds except CO ₂ e)	2024 Emissions	Rank in DelCo	Health Effects
Global Warming Pollution (in metric tons of CO ₂ equivalents)	831,283	4	Extreme weather, disease, crop damage, species extinction
Nitrogen Oxides	2,224,700	1	triggers asthma attacks, chronic respiratory disease and stroke
Carbon Monoxide	786,200	1	headaches and dizziness; increases lifetime risk of heart disease
Sulfur Oxides	221,660	1	triggers asthma attacks; chronic respiratory and heart diseases; stroke
Particulate Matter	88,600	3	heart attacks, stroke, irregular heartbeat, aggravated asthma, decreased lung function, difficulty breathing
Volatile Organic Compounds	21,620	12	eye, nose and throat irritation, headaches, loss of coordination and nausea, liver, kidney and central nervous system damage, cancer
Hydrochloric Acid	20,320	1	irritates eyes, skin, and nose, damages lungs
Fine Particulate Matter	9,860	6	same as above, but worse, gets deep into lungs and into blood stream
Mercury	63	1	damage to nervous, digestive, and immune systems, lowers IQ
Lead	27	2	damages nervous system and kidneys, lowers IQ, increases likelihood of antisocial behavior
Nickel	20	3	allergy, cardiovascular and kidney diseases, lung fibrosis, lung and nasal cancer

To put the smaller numbers in perspective, mercury is one of the toxic pollutants for which there is no known safe level of exposure. Lead and dioxins also have no “safe” level. [Dioxins](#) are the most toxic chemicals known to science – 140,000 times more toxic than mercury – and incinerators are a major source (but good data is lacking). Since it started operating in 1991, the incinerator has never had the pollution controls that remove dioxins and mercury from the air pollution by transferring it to the ash. Most incinerators use a carbon injection system that sprays activated carbon (like Brita filter material) into the exhaust to prevent this from getting into the air – but not in Chester.

The incinerator reported releasing 63 pounds of mercury into the air in 2024, not counting that which gets into the air and water via the ash. A highly cited Minnesota [study](#) found that if approximately one gram of mercury (the amount in a single fever thermometer) is deposited to a 20-acre lake each year from the atmosphere, this small amount, over time, can contaminate the fish in that lake to the point where they should not be eaten. 63 pounds of mercury equals 28,576 grams. That means the incinerator, in a typical year, is releasing enough mercury sufficient to keep over 28,000 20-acre lakes so contaminated that the fish are not safe to eat. The state [advises](#) to limit fish consumption from the Delaware River due to mercury contamination.

But what about buildings and mobile sources? Aren't they a bigger source of pollution to worry about?

Yes, for some pollutants, the fossil fuels burned to heat buildings or move vehicles are the largest share of pollution compared to industry. However, Covanta is the largest polluter of all industrial sources, and is a big share of the total even when compared to everything (vehicles, buildings, etc.). Covanta prefers to compare themselves to mobile and other sources only on pollutants where that makes them look like a smaller contributor. However, for the most toxic pollutants (dioxins, acid gases, and toxic metals), these other sources do not contribute in a significant way, and Covanta’s role is still huge. For example, Covanta emitted 95% of the hydrochloric acid and 63% of the mercury released in the county in 2022.



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