



Exxon Baytown Olefins Plant: Flaring Event

April 16, 2025, 7:37 PM

Stated cause: A “cooling water line rupture” at the Exxon Baytown Olefins Plant caused a base unit shutdown which resulted in the release of thousands of pounds of air pollution from multiple flares, a tubing leak, holes in piping, as well as a furnace fire.

While ExxonMobil claims that “available information, including fence-line monitoring indicates no adverse environmental impact to the site and surrounding community” they did not make this monitoring data or any similar air quality information available to the public.

According to the facility’s [preliminary emission event report](#), the shutdown caused over **92,400 pounds** of pollution to be released into the air. The incident began on Wednesday, April 16 at around 7:30 PM and was reported to have concluded approximately 60 hours later on Saturday morning at approximately 7:30 AM.

Carbon monoxide constituted nearly half of the 92,400 pounds of air pollution released from ExxonMobil’s flares. In a well-maintained flare system, the vented gases would be burned completely and broken down into carbon dioxide and water vapor. However, the overwhelming quantity of carbon monoxide released by the facility indicates a severely inefficient flaring system. Carbon monoxide is highly poisonous, even at low concentrations, and fatally interferes with respiratory processes.



Figure 1: A past emissions event at Exxon Baytown as seen from a residential backyard. Photo credit: Shirley Williams

In addition, the event released significant quantities of ethylene, propylene, benzene, and 1,3-butadiene as well. All of these are considered hazardous air pollutants and contribute to a variety of harmful health and environmental issues within the area

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including respiratory issues, heart disease, asthma, and smog formation. Certain highly toxic pollutants like benzene and 1,3 butadiene are [known carcinogens](#), and can cause cancer even in small amounts. [Our own research](#) found that **33 deaths and multiple asthma hospitalizations** could be prevented **every year** if Exxon Baytown and other large industrial polluters in Houston reduced their air emissions.

In terms of volume, this quantity of pollution occupies over 26 million liters. To place into context, the average person's lung capacity is approximately 6 liters. Therefore, the air pollution released during this singular emission event would fill **over 4.3 million lungs**. Even if **319 METRO buses** were filled with this volume of air pollution, there would still be some left over.

All of these emissions were unauthorized by ExxonMobil's air permits according to [their own emissions event report](#). The quantity of pollution as well as the rate at which it was released into the air far exceeded what the facility is legally allowed to emit.

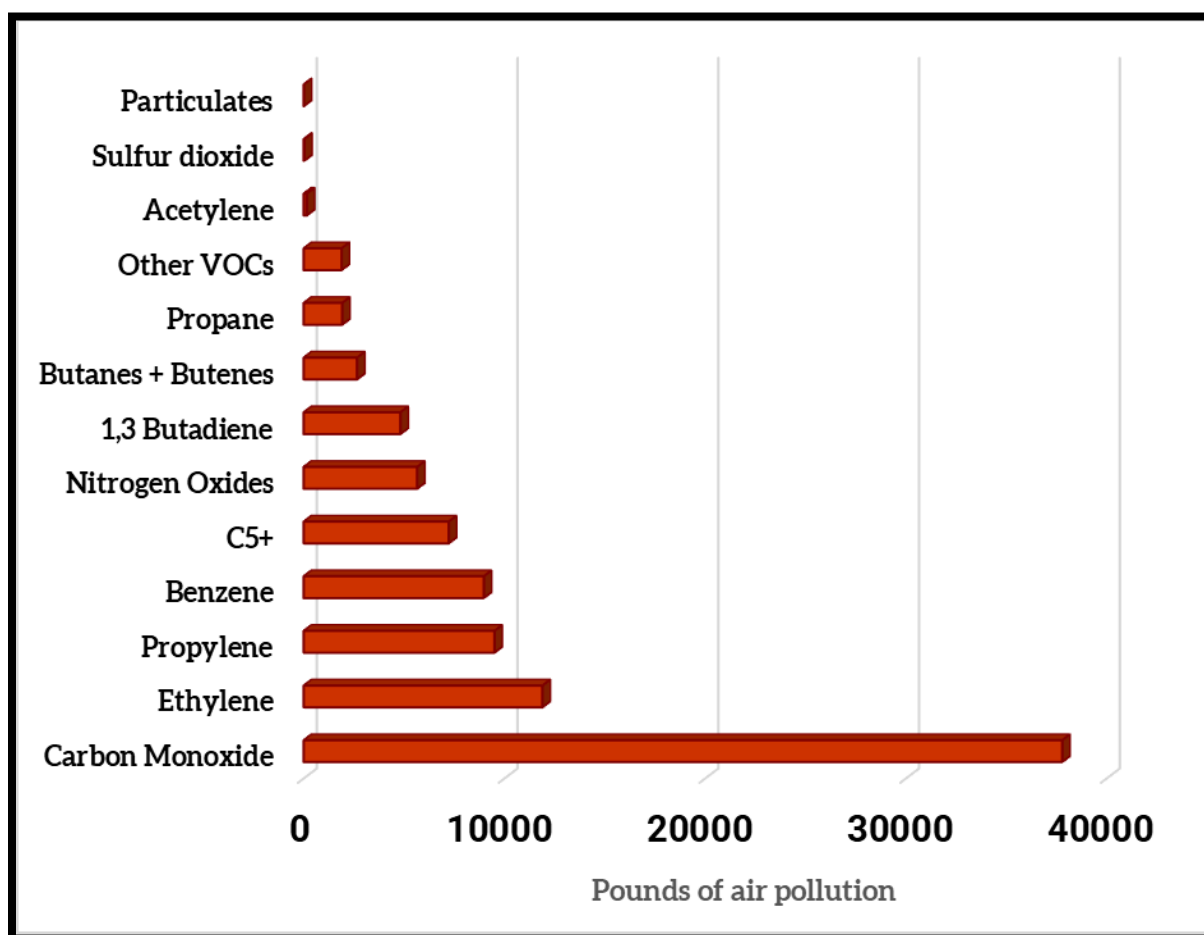


Figure 2: Types and quantities of air pollution released during the flaring event

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Flaring is a threat to our air, our climate, and our health. Findings from recent studies are alarming: flaring has been directly associated with an increase in [asthma rates](#), [preterm births](#), [respiratory-related hospital visitations](#), [risk of liver and bone marrow-related disorders](#), and [premature deaths](#). The effects of many flared compounds—VOCs, PAHs, NOx, SO2, CO, and particulate matter (PM)—are well understood to be either toxic, carcinogenic, or associated with [reproductive damage](#).

The health impacts of industrial flare pollution are not felt equally. Black, Brown, and low-income residents in Houston experience the worst pollution due to a history of redlining and systemic racism. Numerous studies show that flaring-related health conditions disproportionately impact low-income people of color and women in Houston.



Figure 3: The Exxon Baytown Olefins Plant as photographed from an aerial flyover by [Southwings](#)

***Disclaimer:** These quantities are based on engineering estimates conducted and self-reported by the facility themselves. Moreover, the emission event report is considered preliminary since investigations are ongoing. The final reports may have revised estimates.*

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