

For years now, RISE St. James and many other allies have been fighting the air permits that LDEQ issued to Formosa Plastics. We've discussed several of the many dangerous chemicals that Formosa Plastics would emit already, including ethylene oxide, formaldehyde, and benzene. Over the next few months, we'll be talking about some of the lesser known but highly hazardous chemicals that Formosa Plastics plans to emit.

1,3 butadiene (1-3 Byu-ta-die-ene) is a petrochemical that is left over from the production of gasoline. It is a colorless gas with a slight gasoline odor.¹ 1,3 Butadiene is widely used in making synthetic rubber for tires, as well as making acrylic plastic.² Major sources of 1,3 butadiene exposure include refineries, plastic plants, cigarette smoke, and gasoline exhaust.³

Across the 14 separate plants that Formosa Plastics proposes to build, its air permits show it plans to emit 47,780 pounds of 1,3 butadiene into the air each year. This would increase the amount of 1,3 butadiene emitted in Cancer Alley by 7%, when residents already have to deal with air that is some of the most toxic and cancer causing in the nation.⁴

The EPA is currently reassessing the risks that 1,3 butadiene presents to human health.⁵ As part of the process, EPA will evaluate the risks to workers at plants that are exposed to 1,3 butadiene. Chronic (long-term) exposure to 1,3 butadiene may cause leukemia, blood disorders, and cardiovascular disease.⁶ 1,3 Butadiene is carcinogenic to humans, and exposure to 1,3 butadiene causes reproductive problems and birth defects in animals.⁷ 1,3 Butadiene may be the most carcinogenic component of cigarette smoke.⁸

Besides its health effects, 1,3 butadiene is extremely flammable. In 2019, a 1,3 butadiene manufacturing plant in Port Neches, Texas exploded in a blast that was felt 30 miles away.⁹ 6,000 gallons of extremely flammable 1,3 butadiene instantly vaporized, and ignited only two minutes later.¹⁰ The explosion caused over \$150 million in property damage off-site, and resulted in a mandatory evacuation for a four mile radius.¹¹

73.6% of 1,3 butadiene releases nationwide are from plants in Texas and Louisiana, and almost 7% of national emissions are from facilities in Cancer Alley.¹² This is equivalent to about 680,000 pounds per year.¹³ Cancer Alley is also a dumping ground for 1,3 butadiene from other plants;

¹ https://pubchem.ncbi.nlm.nih.gov/compound/1_3-Butadiene

² https://pubchem.ncbi.nlm.nih.gov/compound/1_3-Butadiene

³ https://pubchem.ncbi.nlm.nih.gov/compound/1_3-Butadiene

⁴ https://downloads.regulations.gov/EPA-HQ-OPPT-2018-0451-0050/attachment_2.pdf

⁵ <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-evaluation-13-butadiene>

⁶ https://pubchem.ncbi.nlm.nih.gov/compound/1_3-Butadiene;

<https://www.epa.gov/sites/default/files/2016-08/documents/13-butadiene.pdf>

⁷ <https://www.osha.gov/butadiene/health-effects>

⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1747794/>

⁹ <https://www.texastribune.org/2022/12/20/texas-chemical-plant-explosion-tpc-port-neches/>

¹⁰ https://www.csb.gov/assets/1/17/tpc_factual_update_10-29-2020.pdf?16614

¹¹ <https://www.texastribune.org/2022/12/20/texas-chemical-plant-explosion-tpc-port-neches/>

¹² https://downloads.regulations.gov/EPA-HQ-OPPT-2018-0451-0050/attachment_2.pdf

¹³ https://downloads.regulations.gov/EPA-HQ-OPPT-2018-0451-0050/attachment_2.pdf

almost 13% of 1,3 butadiene waste from across the country ends up in Cancer Alley for processing or disposal.¹⁴ Vopak, the Marathon refinery, Shell Norco, Shintech, and Dow Plaquemine are all major emitters of 1,3 butadiene, as was Shell Convent.

In 2023, EPA announced it was considering new rules for plants that emit hazardous chemicals like benzene, ethylene oxide, and 1,3 butadiene.¹⁵ One proposal is a common-sense, low-cost requirement that plants that produce or store these carcinogenic chemicals must have fence-line air monitors with publicly available data.¹⁶ Importantly, these new rules would also apply during shutdowns and emergency incidents, when flares often release vast quantities of dangerous chemicals beyond what a facility is permitted to emit.¹⁷ These new rules could reduce the number of people at risk of cancer from polluted air by 96%!¹⁸

St. James and the River Parishes are already full of 1,3 butadiene and other toxic chemicals—we say NO to Formosa Plastics and YES to new EPA rules to reduce the emissions of these chemicals!



Each star or point represents a source of 1,3 butadiene emissions. Courtesy of Scott Eustis at Healthy Gulf

HOW TO REDUCE THE NEED FOR 1,3 BUTADIENE

- While not yet available for purchase, Goodyear is developing tires made without petrochemical 1,3 butadiene.

¹⁴ https://downloads.regulations.gov/EPA-HQ-OPPT-2018-0451-0050/attachment_2.pdf

¹⁵

https://www.epa.gov/system/files/documents/2023-04/PROPOSED.%20HON.PR_OVERVIEW.Fact%20Sheet.FINAL_4.6.23_0.pdf

¹⁶

https://www.epa.gov/system/files/documents/2023-04/PROPOSED.%20HON.PR_OVERVIEW.Fact%20Sheet.FINAL_4.6.23_0.pdf

¹⁷ <https://www.hrw.org/report/2024/01/25/were-dying-here/fight-life-louisiana-fossil-fuel-sacrifice-zone>

¹⁸

https://www.epa.gov/system/files/documents/2023-04/PROPOSED.%20HON.PR_OVERVIEW.Fact%20Sheet.FINAL_4.6.23_0.pdf

- Cigarette smoke contains 1,3 butadiene, so quitting will reduce your exposure to 1,3 butadiene.
- Choose high-strength glass over acrylic or Plexiglass, which is made using 1,3 butadiene.