



EPA's Final Rules for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry

Overview

Chemical Plants

More than 200 chemical plants across the U.S.

- Chemical plants make synthetic organic chemicals and polymers and resins
- Some plants make ethylene oxide (EtO) and sell it or use it to make other products; one plant makes and uses chloroprene to produce neoprene

These plants emit hazardous air pollutants (also called air toxics)

- Many air toxics are known or suspected to cause cancer in humans and can have serious health effects even in small quantities
- EtO and chloroprene are air toxics and are linked to cancer

EPA's Final Rule

- Encompasses several rules that apply to these chemical plants
- Will dramatically reduce the number of people with elevated cancer risks from air toxics emissions from these plants
- Will also reduce smog-forming VOCs from plants that make synthetic organic chemicals

What We Know

Synthetic organic chemical facilities are the **primary emitters of EtO**. (They are often called “HON” facilities, because they are covered by the **Hazardous Organic NESHAP**)

EPA’s rule will **dramatically reduce the numbers of people with air toxics-related cancer risks** in communities near chemical plants that emit EtO and chloroprene.

People in vulnerable communities, including people of color and children, often live near chemical plants

Children are growing, and some chemicals are more likely to harm them, including EtO and chloroprene

We expect the final rule will **benefit children**

Changes to the HON will **reduce community-wide risk from air toxics** emitted from large facilities by 96 percent.

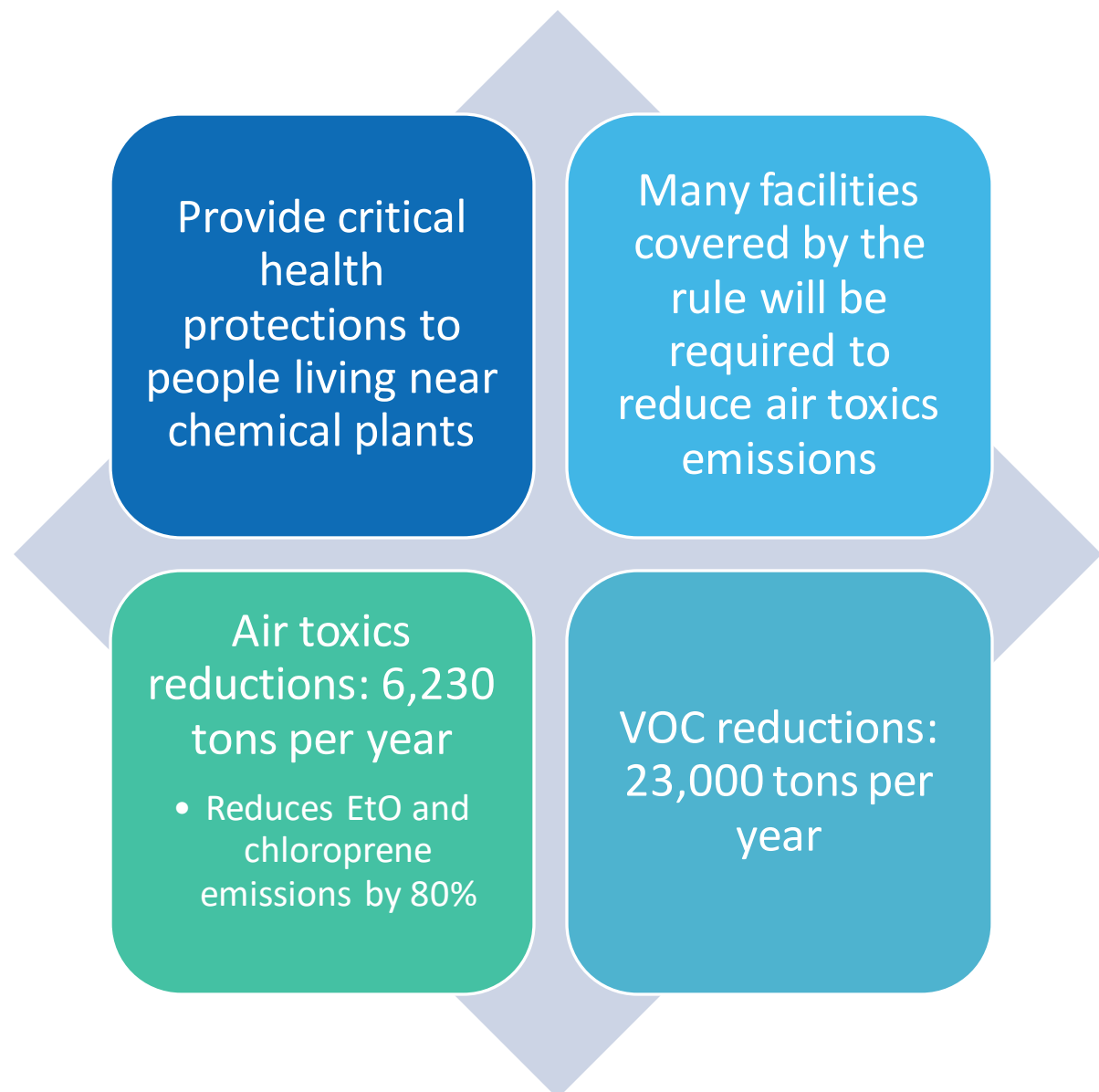
Rules We Are Updating

Air Toxics Rules: National Emissions Standards for Hazardous Air Pollutants (NESHAP)

- Hazardous Organic NESHAP (HON): Encompasses four rules that apply to equipment and processes at chemical manufacturing plants that make hundreds of bulk synthetic organic chemicals; plants sell the chemicals or use them to make other chemicals
- Polymers and Resins Groups I and II: Rules apply to specific equipment and processes at plants that make a variety of polymers and resins, including neoprene; many are “co-located” with chemical plants, meaning they are located on the same site

New Source Performance Standards (NSPS)

- Four NSPS that apply to chemical plants that make synthetic organic chemicals



Final Rule Highlights

Key Requirements in the Final Rule

Tighter requirements for emission sources of **EtO and chloroprene** to reduce **elevated cancer risks**

New requirements to **improve efficiency of flares**

Emissions limits for **dioxins and furans**

Remove general exemptions from emissions control requirements during periods of startup, shutdown, and malfunction

Fenceline monitoring for six air toxics: EtO, benzene, 1,3-butadiene, chloroprene, ethylene dichloride and vinyl chloride. Applies to facilities that are covered by the rule and that use, store or emit the chemicals.

Key Changes Since Proposal

Chloroprene

- 90-day deadline for existing neoprene production sources to:
 - Meet risk-based standards to reduce chloroprene emissions
- Not finalizing a facility-wide cap on chloroprene emissions

EtO

- Not finalizing EtO flare load limit.
- Additional modeling showed limit is not necessary when other requirements in the rule are implemented

Fenceline Monitoring

- Updated deadlines for facilities to begin fenceline monitoring
 - Two years for HON facilities
 - 90 days for chloroprene at neoprene production facilities
- Setting two chloroprene action levels: a higher level for chloroprene at HON facilities not collocated with neoprene production sources, and a lower action level for facilities with neoprene production sources.

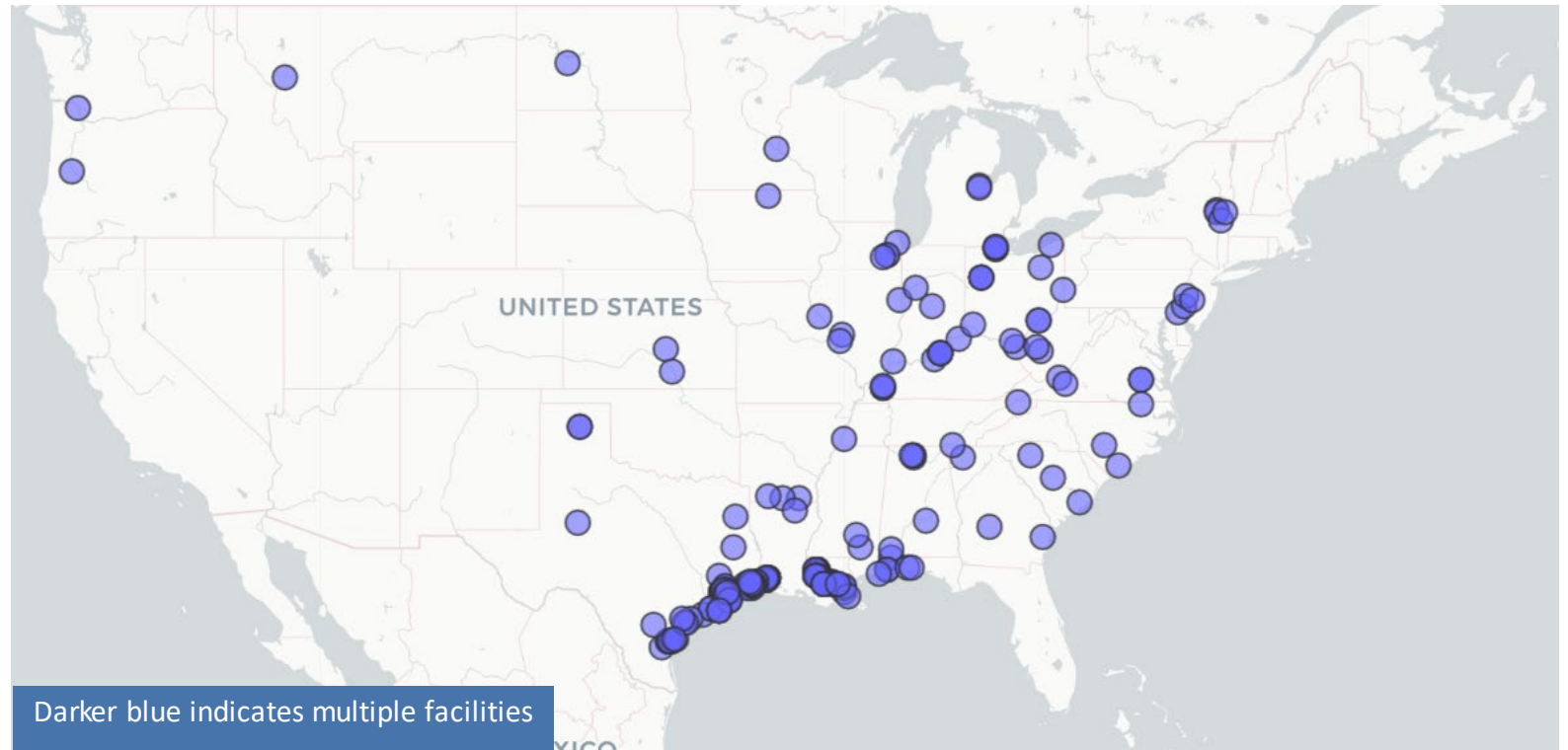
Regulatory Impact Analysis

Benefits

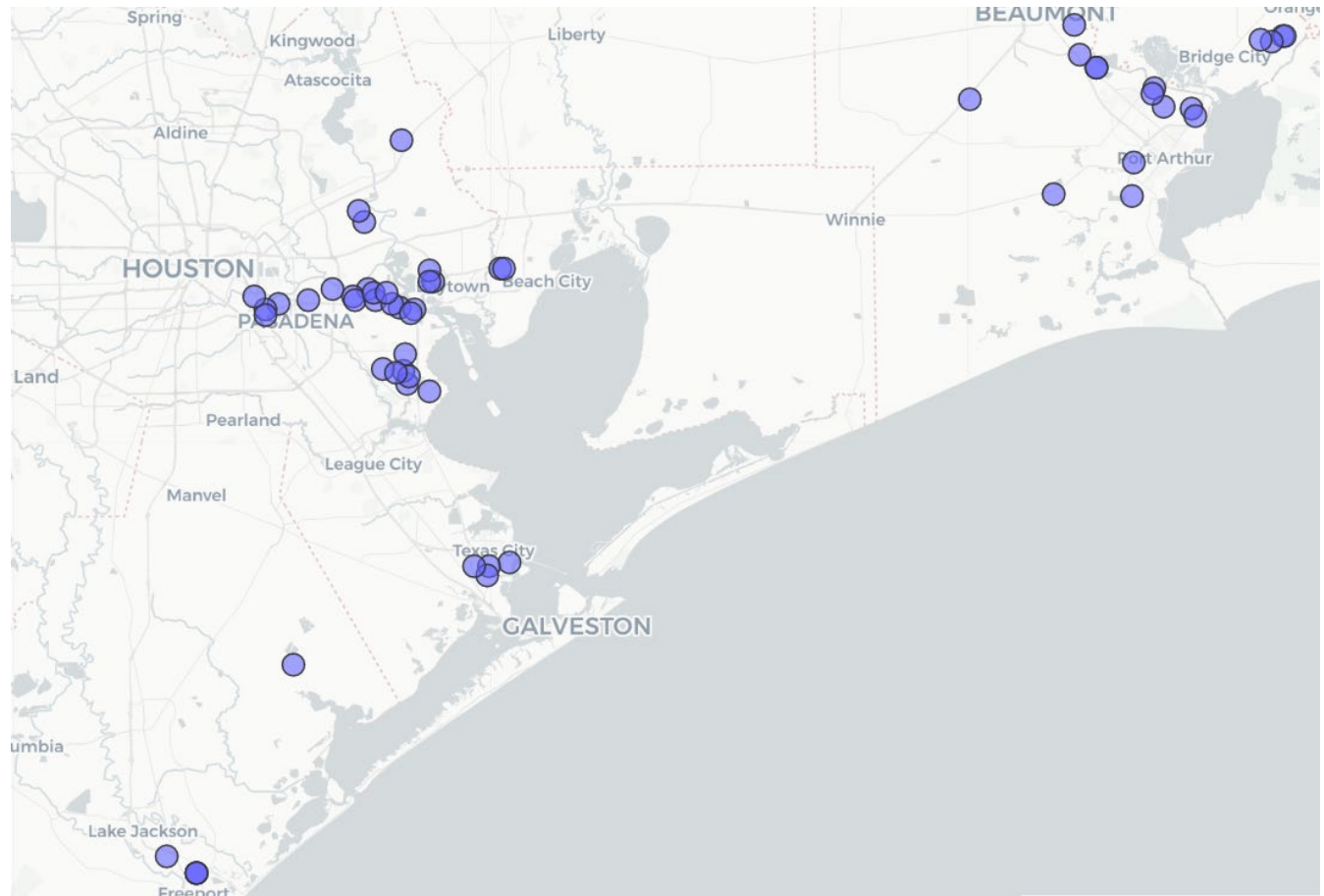
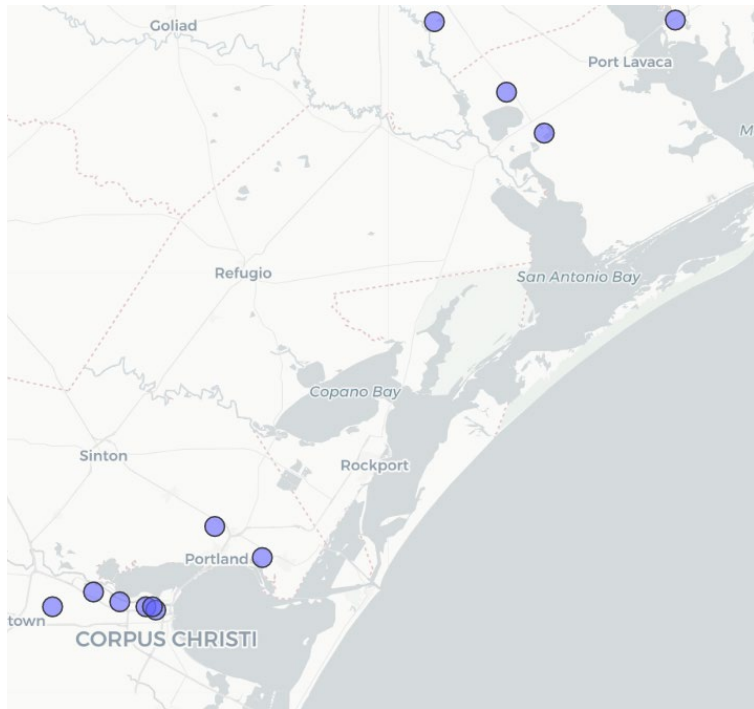
- Significant reductions in lifetime cancer risk from exposure to EtO and chloroprene, in addition to other health benefits. EPA is not able to estimate the full dollar value of these benefits.
- Value of health benefits of smog reductions that will result from VOC reductions in the rule:
 - \$77 million (2021\$, 3 percent discount rate), which reflects the benefits of reducing short-term ozone exposure (equivalent to \$6.5 million a year); and
 - \$690 million (2021\$, 3 percent discount rate) to reflect the benefits of reducing long-term ozone exposure.
- Estimated present value of costs of complying with the rule: \$1.8 billion (2021\$, 3 percent discount rate) from 2024-2038, the equivalent of \$150 million a year. The annual costs include the value of product recovery.
- Most of the facilities covered by the final rule are owned by large corporations. The cost of implementing the final rule is less than 1 percent of their annual national sales.

Nationwide Geographic Facility Distribution

- There are approximately 207 HON facilities, 19 P&R I facilities, and 5 P&R II facilities (many of the P&R facilities are co-located with chemical plants)
- Most facilities covered by proposal are owned by large companies; nearly two thirds are located in Texas and Louisiana
- Approximately 9.3 million people live within 10 km of the HON facilities

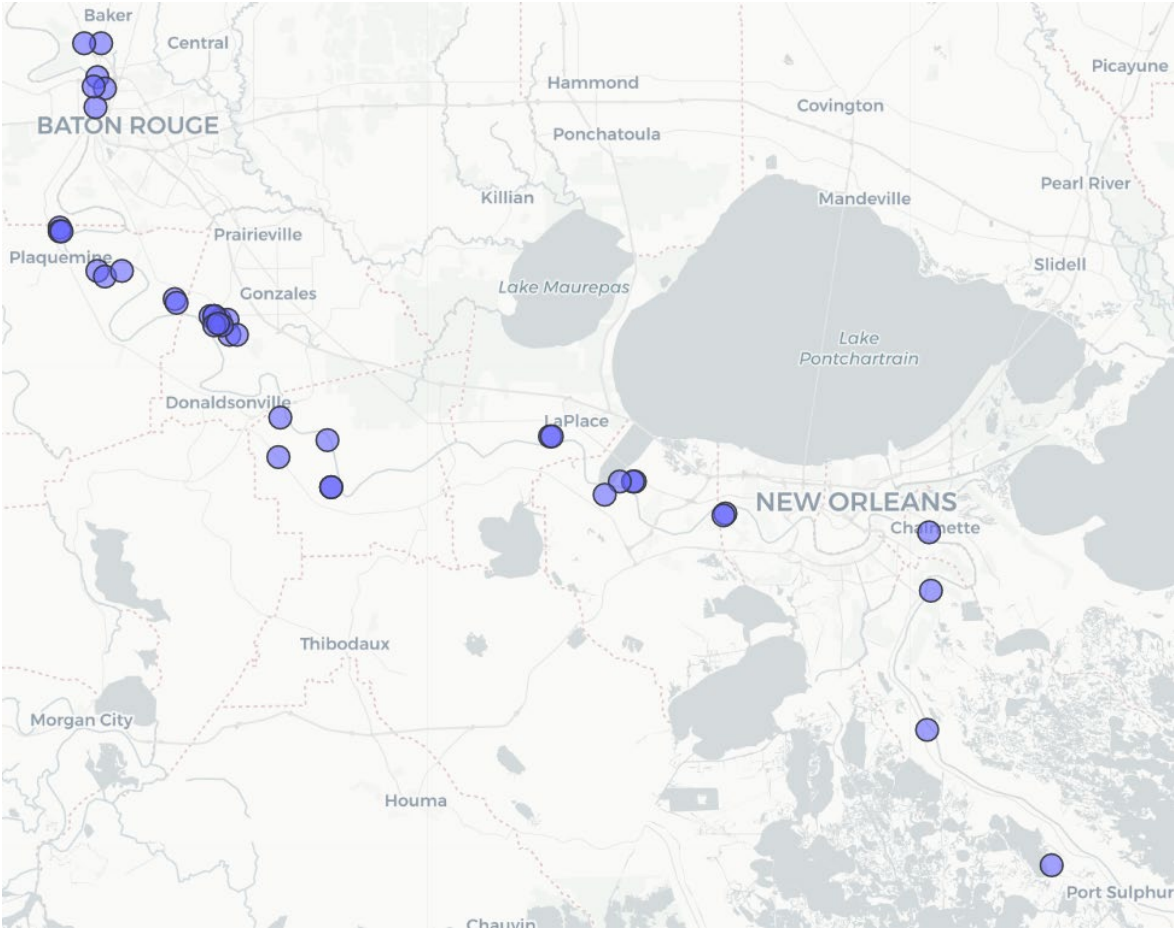
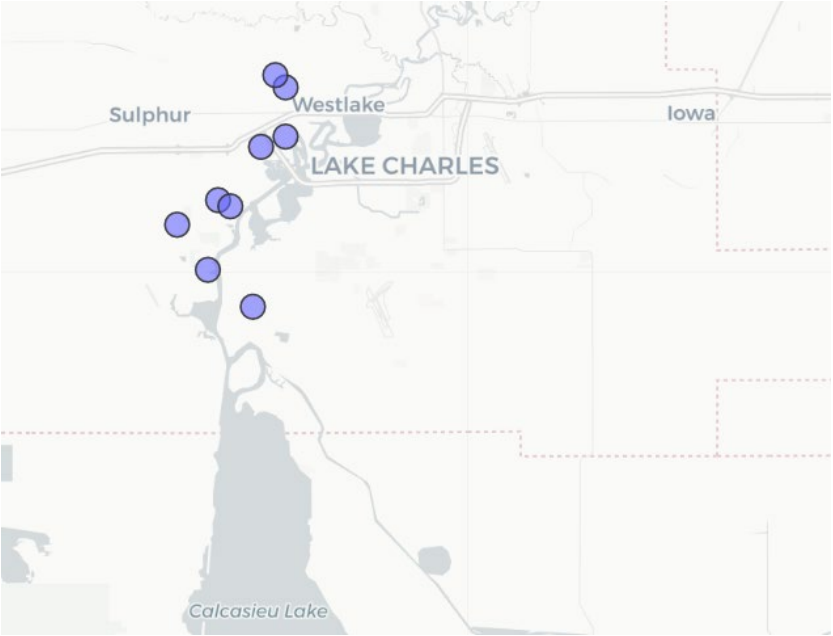


Texas Facilities



- Some facilities are covered by multiple rules
- Darker blue = multiple facilities in the area

Louisiana Facilities



- Some facilities are covered by multiple rules
- Darker blue = multiple facilities in the area

Website for the final rule

<https://www.epa.gov/eto/hon>