

# Regulating Air Pollution under the Clean Air Act

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The Clean Air Act requires EPA to protect air quality and directs different approaches to address different types of air pollution. Here we will look at “hazardous” and “common” air pollutants.

## **Hazardous (or Toxic) Air Pollutants**

*Ethylene oxide is a hazardous air pollutant, which is also referred to as a toxic air pollutant.*

There are 187 different toxic air pollutants regulated by EPA. They are known to cause cancer and other serious health impacts such as reproductive effects or birth defects. EPA does not set ambient standards for these pollutants, but rather develops standards specifically for those industrial facilities that emit them in two phases.

- The first phase is “technology-based.” EPA develops emissions standards for controlling air toxics from sources in an industry group (or “source category”). These emissions standards, called maximum achievable control technology (MACT) standards, are based on emissions levels that are already being achieved by the best-controlled and lowest-emitting sources in an industry. EPA has completed this initial phase of emission limitations for almost all listed source categories.
- The second phase is “risk-based.” Within 8 years of setting the MACT standards, the Clean Air Act directs EPA to assess the remaining health risks from each source category to determine whether the MACT standards protect public health with an ample margin of safety and protect against adverse environmental effects. In this phase, called residual risk, the EPA must determine whether more health-protective standards are necessary.
  - Also, every 8 years after setting the MACT standards, the Clean Air Act requires that the EPA review and revise the MACT standards, if necessary, to account for improvements in air pollution controls and/or pollution prevention.

*EPA is reviewing Clean Air Act regulations for facilities that emit ethylene oxide:*

- EPA has begun reviewing its emissions standards for miscellaneous organic chemical manufacturing facilities, some of which emit ethylene oxide.
- The Agency also plans to take a closer look at its rules for other types of facilities that emit ethylene oxide, beginning with its emissions standards for commercial sterilizers.

*EPA is also getting additional information on ethylene oxide emissions*

- EPA is gathering additional information on industrial emissions of ethylene oxide, which may include data from testing at facilities.
- This information will help EPA as it looks for opportunities to reduce ethylene oxide emissions as part of its regulations review.
- It also will help us determine whether more immediate emission reduction steps are necessary in any particular locations.

## **Common Air Pollutants**

EPA takes a different approach for regulating common air pollutants. The Agency sets health-based outdoor air quality standards known as National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These pollutants, also known as criteria pollutants include ozone, particle pollution, oxides of nitrogen, sulfur dioxide, lead and carbon monoxide. They are found all over the U.S. and can harm your health and the environment, and cause property damage. EPA works closely with state, local and tribal environmental agencies to monitor outdoor air quality for these pollutants, and limit emissions as needed to assure these standards are not exceeded.

## **Compliance with Air Pollution Controls**

Sources must get Clean Air Act operating permits from the appropriate permitting authority, which is generally the state air agency. These permits list requirements to control air pollution that apply to a source. Sources must comply with these permits or face penalties.

## **How can I submit questions?**

Email your questions to: [eto@epa.gov](mailto:eto@epa.gov)