

NAVIGATING THE CLEAN AIR ACT

Since it was reauthorized six years ago, the Clean Air Act (CAA) has generated an extraordinary amount of regulatory activity by both EPA and the states. The programs these agencies are implementing are often complex and as such it may be helpful to step back for a moment and look at the overall framework established to improve air quality in the United States.

Title I -- Urban Air

Title I of the CAA contains general statements of policy, authorizes financial assistance to states, and establishes a framework for national ambient air quality standards for six so-called "criteria" pollutants, including ozone. VOCs are regulated under the criteria pollutants program as ozone precursors.

Title II -- Motor Vehicles

This section of the CAA establishes emission control programs for automobiles, trucks, and airplanes. EPA is also empowered to target facilities and areas that attract mobile sources of pollution.

Title III -- Air Toxics

In Title III, Congress established a list of 189 hazardous air pollutants or "HAPs." EPA is required to establish technology-based standards for industry sources of HAPs. Once these standards are in place, EPA must conduct a "residual risk" evaluation of their effectiveness in controlling emissions to determine if additional regulation is needed. This section also covers general administrative provisions, citizens suits, and judicial review of EPA CAA rules.

Title IV -- Acid Rain

Congress established a program to allow sulfur dioxide emissions to be allocated and traded. In addition, nitrogen oxide emission limitations are required for certain coal-fired electric utility units. Industries most affected are those that burn coal or oil or otherwise emit substantial quantities of these pollutants.

Title V -- Operating Permits

The minimum elements of state operating permit programs are contained in Title V. Major sources must obtain an operating permit that addresses all pollution control obligations. Sources must also file periodic reports on the extent of their compliance.

Title VI -- Stratospheric Ozone

To address global warming, Title VI authorizes EPA to establish labeling requirements for products manufactured with ozone-depleting substances and products containing such substances. EPA is authorized consistent with the Montreal Protocol to phase-out ozone-depleting compounds.

GLOSSARY OF KEY AIR POLLUTION CONTROL TERMS

Area Source	Any stationary source of hazardous air pollutants that is not a major source. Attainment Area An area considered to have air quality as good or better than the NAAQS.
BACT	Best Available Control Technology is the technology required pursuant to § 165 on new major sources and major modification subject to PSD requirements (sources located in attainment areas), which reflect the best control in use taking into account costs. PSD, or Prevention of Significant Deterioration, is a program established under Title I of the Clean Air Act to preserve air quality in areas already meeting the National Ambient Air Quality Standards (NAAQS).
Criteria Pollutants	Emissions which are subject to National Ambient Air Quality standards (NAAQS). They are: lead (Pb); oxides of nitrogen (NOx); sulfur dioxide (SO ₂); ozone; carbon monoxide (CO); and small particulates (PM-10).
CTGs	Control Technique Guidelines. EPA's method of applying the RACT

	concept to specified industrial categories in nonattainment areas; they contain information both on the economic and technological feasibility of available techniques. CTGs will be expanded and revised by EPA in the near future.
FIP	Federal Implementation Plan. Plans promulgated by EPA if states fail to develop approvable SIPs.
Fugitive Emissions	Emissions not caught by an emission control or capture system.
HAPs	Hazardous Air Pollutants. One of 189 air pollutants listed in CAA § 112. Many of these substances are also VOCs.
LAER	Lowest Achievable Emissions Rate is the degree of control required pursuant to § 173 of the Clean Air Act on new major sources and major modifications in nonattainment areas; the technology must be in use or most stringent in any SIP (does not take into account cost). LAER is the most stringent emission limitation among control technologies.
MACT	Maximum Achievable Control Technology (MACT). The maximum degree of reduction that is achievable through capture, treatment, process changes, substitution of materials and work practices, and taking into account costs and benefits. MACT may be varied depending on whether the source is a new, existing, or area source.
Major Source	(also "Major Stationary Source") The definition varies depending upon the level of attainment for a particular pollutant in the area in which the plant is located. For example, in severe ozone nonattainment areas, a major source will be one that emits more than twenty-five tons of ozone precursors. For hazardous pollutants, a major source is an industrial facility which emits 10 tons per year of any single air toxic or 25 tons per year of any combination of air toxics.
NAAQS	National Ambient Air Quality Standards. Maximum allowable concentrations of pollutants which represent goals for desirable air quality for human health (primary standards) and agricultural, production, and aesthetic purposes (secondary standards). EPA sets these standards for each criteria pollutant.
NESHAP	National Emissions Standards for Hazardous Air Pollutants. Program established under CAA § 112 to regulate HAPs.
Nonattainment	Failure to meet the NAAQS for a criteria pollutant in a particular AQCR. In 1977, Congress divided all areas of the country into two categories: those that failed to meet NAAQS (i.e., nonattainment areas) and PSD areas. Nonattainment areas are further categorized as "extreme," "severe," "moderate," or "marginal." The more polluted the area, the more stringent the restrictions.
NSR	New Source Review. Program for pre-construction review of new major sources and major modifications under PSD and Nonattainment

	requirements.
NSPS	New Source Performance Standards. Emission limitations for stationary sources in particular industrial categories. NSPS target specific pollutants from specified industries, rather than air quality in general.
Ozone Smog	Ozone is not a pollutant emitted directly into the atmosphere but rather is the product of a complex series of chemical reactions initiated when VOCs and NOx emissions are exposed to sunlight. It should not be confused with the layer of ozone in the upper atmosphere (stratospheric ozone) which shields the sun's harmful ultraviolet radiation. Permit Program The air emissions source operating permit program established under CAA Title V.
PM-10	The regulatory identifier for all types of airborne particulate matter with a diameter of less than 10 microns. Smaller particles are more likely to cause adverse health effects because of their ability to penetrate the body's natural defenses.
Potential To Emit	The maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment, restrictions on the hours of operations, or on the type or amount of material combusted, stored or processed shall be considered if the limitation is federally enforceable.
PSD	Prevention of Significant Deterioration. Generally refers to one of the two programs Congress created in 1977 (the other being the nonattainment program). The PSD program is designed to avoid degradation of air quality in areas of the country with satisfactory air quality.
RACT	Reasonably Available Control Technology is the technology required for existing major source in nonattainment areas. RACT typically reflects controls the EPA has identified in Control Technique Guidelines (CTG) or other guidance. SIPs must be revised to required RACT for control of VOC emissions from sources for which EPA has published (or will publish) a CTG.
SIP	State Implementation Plan. A state-specific plan for ensuring that all nonattainment areas within a state meet ambient air quality standards (NAAQS) and for avoiding degradation of air quality in PSD areas within the statutory deadline.
Synthetic Minor Sources	Sources that would otherwise be classified as "major sources" based on their "potential to emit" but avoid classification as a major source by agreeing to observe an emission limit below the applicable major source threshold. The emission limit must be physical or operational and must be federally enforceable.
VOCs	Volatile Organic Compounds. A general term for a wide range of hydrocarbons which come from combustion processes, gasoline vapors, solvents, etc. With NOx and sunlight, VOCs react to form ozone.

