

Proposed Rule - Revisions to Ambient Air Monitoring Regulations

FACT SHEET

ACTION

- On December 20, 2005, the Environmental Protection Agency (EPA) proposed amendments to its national air quality monitoring requirements, including requirements for monitoring particle pollution. The changes will help EPA, states and local air quality agencies in their efforts to improve public health protection and inform the public about air quality in their communities, and it will allow air quality regulators to take advantage of improvements in monitoring technology.
- The changes would affect monitoring for six common pollutants known as “criteria pollutants” and their precursors. The six pollutants are: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particle pollution (also called particulate matter), and lead.
- The proposed changes focus on ensuring that monitors are located where they are most needed: in areas with air quality problems. The changes also would move some monitors within areas so that multiple pollutants are measured at the same location rather than at scattered locations. The proposal also would add more real-time monitors for some pollutants and would establish a new network for coarse inhalable particle pollution (PM_{10-2.5}).
- By co-locating and improving these monitors, EPA will enhance the ability to examine the effects of multiple pollutants and to improve models for evaluating pollution control strategies and forecasting air quality.
- The proposed changes also would establish monitoring networks needed to support proposed changes to EPA’s National Ambient Air Quality Standards (NAAQS) for particle pollution. EPA proposed revising those standards in a separate action on December 20, 2005.
- The methods, technologies and approach contained in the proposal have been reviewed by EPA’s Clean Air Scientific Advisory Committee (CASAC).
- EPA is seeking public comment on this proposal, especially on the design of a network to monitor PM_{10-2.5}. The Agency will take comment on the proposal for 90 days following publication in the Federal Register. See below for [commenting instructions](#).

WHAT THE PROPOSAL WOULD REQUIRE

- The proposal would: change the locations of some types of monitors, add new monitors for some pollutants, and allow states to shut down unneeded monitors for some pollutants. Below is a summary of changes.

New multi-pollutant monitoring sites

- EPA and the states would add about 75 multi-pollutant monitoring sites. Monitoring multiple pollutants at the same site will help EPA improve air quality management by enhancing the Agency's ability to model and forecast air pollution. The sites also will provide real-time data for some pollutants, including particle pollution and ozone.
- EPA is proposing to locate 55 of these sites in urban areas and 20 in rural areas in order to help enhance the understanding of how pollution travels and of the differences between air quality in urban and rural areas.

Particle pollution monitors

- EPA and the states would establish a new network of about 250 monitors to measure "inhalable coarse particles," which are particles larger than 2.5 and up to 10 micrometers in diameter (PM_{10-2.5}). These monitors would include continuous mass concentration monitoring (monitoring to show the total amount of PM_{10-2.5}) and speciation (monitoring to determine the composition of the PM_{10-2.5}).
- The monitoring network for fine particles (PM 2.5) would continue, but some monitors could be moved.
- PM 2.5 speciation monitoring also would continue.
- EPA is proposing that existing PM 10 monitors would remain in urban areas that are exceeding the PM 10 standard. Other PM 10 monitors could be shut down.

Ozone monitors

- EPA and the states would continue to run a large network for monitoring ozone levels. Some monitors could be relocated for better coverage.

Carbon monoxide monitors

- Carbon monoxide is only a problem in very few areas of the country. Those areas would be required to continue monitoring under this proposal. All others would be allowed to shut down their monitors. Carbon monoxide would also be monitored at all of the new multi-pollutant sites.

Lead monitors

- Lead in the outdoor air is a problem only in a limited number of areas. Monitors would remain in place in those areas and in any areas anticipated to have lead problems.
- EPA would also maintain a limited number of monitors, including some monitors at the new multi-pollutant sites, to track air quality trends. Other lead monitors located in areas without lead air quality problems could be shut down.

Sulfur dioxide monitors

- There are only a few nonattainment areas for sulfur dioxide (SO₂) in the United States, and there should be even fewer still in 2015 due to implementation of the Administration's CAIR program. However, even low levels of SO₂ can contribute to fine particle pollution across many parts of the country. The proposal would improve the Agency's ability to monitor SO₂ pollution by using improved technology (at the 75 multi-pollutant sites) that can detect SO₂ at lower levels than existing monitors can measure.
- States would have to continue using existing monitors in nonattainment areas violating, or anticipated to violate, the SO₂ standard. Other existing monitors could be shut down.

Nitrogen dioxide monitors

- Under the proposed changes, the vast majority of existing nitrogen dioxide monitors in the country could be shut down because there are no current nonattainment areas. One "maintenance area" (Los Angeles/South Coast Air Basin) would have to continue operating existing monitors.
- Because oxides of nitrogen contribute to ozone and particle pollution formation, several categories of oxides of nitrogen, known collectively as total reactive nitrogen (NO_y), would be measured at the multi-pollutant sites. This new measurement system will be more useful in supporting models and air pollution forecasts than existing nitrogen oxides (NO_x) technology.

Special-purpose monitors

- The EPA proposal would give states more flexibility to deploy Special Purpose Monitors for short periods of time (in addition to the monitors they are required to operate) to assess suspected air pollution problems without immediate regulatory consequences.

Technical changes

- The proposed amendments would also make a number of technical changes including:
 - Updating quality assurance requirements with an emphasis on using the data quality objectives process to ensure quality data.
 - Revising statistics used for calculating precision and bias.
 - Revising the requirements for designating monitoring methods known as "federal reference" methods.
 - Revising regulations for approving PM_{2.5} monitoring methods that could be considered equivalent to the Federal Reference Method and adding new requirements for approving equivalent methods for continuous PM_{2.5} and PM_{10-2.5} monitoring.
 - Provide flexibility for states to use certain methods for continuous monitoring of PM_{2.5} mass in regions where those methods work well. These methods could be used to meet multiple monitoring objectives, including determining whether an area is meeting air quality standards.
 - Reduce the supplemental data reporting requirements for filter-based PM_{2.5} monitors

- Clarify data certification requirements and require an accelerated schedule for states to complete annual certification letters and transmit them to EPA.
- Consolidate and reorganize several technical appendices.

BACKGROUND

- Ambient air monitoring systems play a critical role in the nation's air quality management program infrastructure. They are used for a wide variety of purposes, including providing data used to determine whether areas are meeting the NAAQS.
- Other important uses of these monitors include: support of timely reporting of the Air Quality Index and issuing air quality forecasts, support of long-term health assessments, and tracking long-term air quality both to gauge effectiveness of emission control strategies and to quantify accuracy of supporting model evaluations.
- EPA sought expert scientific review of the proposed methods, technologies, and approach for ambient air monitoring from the Clean Air Scientific Advisory Committee (CASAC). The CASAC is an independent scientific advisory committee established, in part, to provide advice, information and recommendations on the scientific and technical aspects of issues related to air quality criteria and the NAAQS.
- EPA consulted with the CASAC Ambient Air Monitoring and Methods Subcommittee throughout the development of the proposed amendments.
 - In July 2003, CASAC's National Ambient Air Monitoring Strategy Subcommittee held a public meeting to review EPA's draft National Ambient Air Monitoring Strategy which contained technical information related to the planned changes to the ambient air monitoring networks.
 - Public meetings were also held in July 2004, December 2004 and September 2005 to discuss the CASAC's review of nearly 20 documents concerning: performance-based standards for continuous monitors for particulate matter (PM), data quality objectives for coarse particles and PM continuous methods, criteria for designation of equivalent methods, methods and technology for measurement of fine and coarse particles, reconfiguration of ambient air monitoring stations, and other technical aspects of the proposed amendments. These documents, along with CASAC review comments and other information, are available at: <http://www.epa.gov/ttn/amtic/casacinf.html>.
- Additional information about the national air monitoring network is available on the Ambient Monitoring Technology Information Center section of EPA's Technology Transfer Network at: <http://www.epa.gov/ttn/amtic/>

FOR MORE INFORMATION

- Interested parties can download the notice from EPA's web site on the Internet at: www.epa.gov/air/particles.actions.html

- Today's proposed action and other background information are also available either electronically at www.regulations.gov, the federal government's docket management system, or in hard copy at EPA West, U.S. EPA (6102T), 1301 Constitution Avenue, NW, Washington, DC 20460. (Docket ID No. OAR-2004-0018). The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742.

HOW TO COMMENT: Comments will be accepted for 90 days beginning when this proposal is published in the Federal Register. All comments should be identified by Docket ID No. OAR-2004-0018 and submitted by one of the following methods:

- Federal e-rulemaking portal;
- www.regulations.gov;
- E-mail (a-and-r-docket@epa.gov);
- Facsimile (202) 566-1741;
- Mail (Air and Radiation Docket and Information Center, Environmental Protection Agency, Mailcode: 6102T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460); or
- Hand delivery (Air and Radiation Docket and Information Center, Environmental Protection Agency, Room B102, 1301 Constitution Avenue, NW, Washington, DC).