

**December 18, 2002**

## **Fact Sheet**

### **Revision to the PM<sub>2.5</sub> Ambient Air Monitoring Precision Collocation Requirements**

#### **TODAY'S ACTION**

- ! The Environmental Protection Agency (EPA) is today issuing a direct final rule to reduce the requirement that air quality agencies collocate fine particulate (PM<sub>2.5</sub>) air samplers from 25 percent to 15 percent of a reporting organization's sites. Fine particles are 2.5 micrometers in diameter or smaller.
- ! Collocation is a technique used to estimate the precision or repeatability of an air quality agency's PM<sub>2.5</sub> network. The process involves setting up a second PM<sub>2.5</sub> sampling instrument within one to four meters of a primary sampler and collecting samples from both during the same time period.
- ! EPA chose to reduce the collocation requirement, after reviewing the Agency's initial data quality objectives for the PM 2.5 monitoring network, and determining that the PM 2.5 monitoring network could be less precise without adversely effecting overall data quality. Based on experience with the monitoring network, EPA concluded that a 15 percent collocation requirement will provide data of acceptable precision.
- ! Today's action will affect state, local and tribal air pollution agencies collecting PM<sub>2.5</sub> ambient air monitoring data that must meet EPA's quality assurance requirements.
- ! This requirement will reduce the number of monitors that agencies must maintain, allowing available monitors to be used more effectively.
- ! EPA is issuing this final rule without a prior proposal because the Agency does not anticipate opposition to this amendment. However, if EPA receives significant comments opposing this action, we will withdraw the notice and carefully evaluate the comments before taking any final action.

#### **BACKGROUND**

- ! The Clean Air Act requires EPA to set National Ambient Air Quality Standards for six major pollutants harmful to public health and the environment. These pollutants are ozone, particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide, and lead.
- ! On July 18, 1997, EPA promulgated the regulations for fine particulate matter (PM 2.5)

monitoring. In the rule, EPA indicated that the Agency had established an incentive program to be based on network performance and maturity. States demonstrating long-term satisfactory data quality performance could reduce the number of EPA's quality assurance requirements, such as collocation, they must meet.

- ! In order to ensure that data of adequate quality are being collected for the PM<sub>2.5</sub> network, EPA developed data quality objectives for precision and bias. These objectives help evaluate and control the data's precision and bias and provide data users an understanding of the confidence they can have in annual estimates of PM<sub>2.5</sub>.
- ! Precision is the ability of a measurement to be consistently reproduced. Bias is the systematic distortion of a measurement process which causes errors in one direction.
- ! EPA's quality assurance requirements for PM<sub>2.5</sub> monitoring state that 25 percent of the sites within a reporting area must be collocated with a second federal reference monitor in order to provide an estimate of precision.
- ! A federal reference monitor is a monitor that has been accepted for use by EPA for comparison to the national ambient air quality standards because it meets both the design specifications and meets certain precision, and bias (performance) specifications.
- ! EPA assessed the quality of PM<sub>2.5</sub> data for both calendar years 1999 and 2000 and found that the majority of the reporting organizations are producing data that meet or exceed our data quality expectations.

### **FOR MORE INFORMATION**

- ! To download today's rule from EPA's web site, go to "Recent Actions" at the following address: <http://www.epa.gov/ttn/oarpg>.
- ! For further information concerning the change in the requirement, contact Michael Papp at EPA's Office of Air Quality Planning and Standards at (919) 541-2408.