

## **AUGUST 2003 DRAFT STAFF PAPER FOR PARTICULATE MATTER**

### **FACT SHEET**

#### **OVERVIEW**

- On August 29, 2003, EPA's Office of Air Quality Planning & Standards (OAQPS) released the first draft of a staff assessment of the policy implications of scientific and technical information about particulate matter, also called "PM" or "particle pollution."
- The draft document, known as a "staff paper," is part of EPA's regular review of its National Ambient Air Quality Standards for particulate matter. The assessment, conclusions, and recommendations are preliminary staff judgments that are subject to scientific peer review and revision following peer and public review. As such, they do not represent Agency policymaker judgments on these important issues.
- The August 2003 draft staff paper includes the preliminary staff judgment that the latest scientific, health and technical information about PM does not support relaxing EPA's current standards for fine particles, also known as PM<sub>2.5</sub>.
- The draft staff paper also notes that the Agency intends to consider changing its standards for coarse particles to avoid "double regulating" fine particles (consistent with a 1999 court decision) and to reflect the latest science about particulate matter.
- The draft is based on the latest draft of the Agency's "criteria document" for particulate matter. The criteria document, prepared by EPA's Office of Research & Development, is a compilation and evaluation of the latest scientific knowledge useful in assessing the health and welfare effects of particulate matter pollution.
- Before the final staff paper can be used as the basis for any policy decisions, it will be reviewed by the scientific community, industry, public interest groups, the general public, and the Clean Air Scientific Advisory Committee. That committee also will make recommendations to the EPA Administrator regarding the particulate matter standards.
- EPA will not base any regulatory decisions on this draft. However, OAQPS will provide the final staff paper to EPA's Administrator, who is charged by law with deciding whether the particulate matter standards should be changed. The final staff paper will include recommended options for the Administrator to consider in making that decision.
- Under a consent agreement with nine environmental groups, the Administrator must issue a proposal regarding the particulate matter standards by March 31, 2005, and a final rule by Dec. 20, 2005. That rule may, or may not, include revisions to the standards.

## KEY ELEMENTS OF THE AUGUST 2003 DRAFT

- The draft staff paper addresses both fine particles (those 2.5 micrometers in diameter and smaller) and “coarse fraction” particles (those larger than 2.5 micrometers, but with a diameter smaller than 10 micrometers). Particle standards are expressed in “micrograms per cubic meter air,” which is a measure of particles found in the air.
- The staff paper includes the following preliminary staff judgements and conclusions about the existing particulate matter standards for fine (PM<sub>2.5</sub>) and coarse particles:
- The scientific evidence provides direct and strong support for PM<sub>2.5</sub> standards that provide at least the level of protection afforded by the current primary (health based) standards. While this evidence clearly supports the current standards, consideration should be given revising both the annual and 24-hour standards to provide additional health protection.
  - ▶ Consideration should be given to selecting the annual PM<sub>2.5</sub> standard from a range extending from the current level of 15 down to 12 micrograms per cubic meter (µg/m<sup>3</sup>); and
  - ▶ Consideration should be given to revising the current 24-hour PM<sub>2.5</sub> standard (65 µg/m<sup>3</sup>) to a level selected from a range of 50 to 30 µg/m<sup>3</sup>.
- The scientific evidence also supports continuing separate standards for coarse particles, but the current indicator for coarse particle standards (PM<sub>10</sub>) should be revised to exclude fine particles. The recommended coarse particle indicator includes particles larger than 2.5 micrometers but smaller than 10 micrometers, expressed as PM<sub>10-2.5</sub>.
  - ▶ The scientific and technical evidence supports setting both annual and 24-hour standards for coarse-fraction particles, but also may support setting just a 24-hour standard,
  - ▶ The level of the annual coarse-fraction standard should be selected from a range of 30 to 13 µg/m<sup>3</sup>.
  - ▶ The level of the 24-hour standard should be selected from a range of about 75 µg/m<sup>3</sup> to 30 µg/m<sup>3</sup>.
- Staff further recommends continued protection against the welfare effects of fine and coarse particles. *Primary standards* are designed to protect public health with an adequate margin of safety; *secondary standards* are designed to protect against “welfare effects” including ecological damage, visibility impairment (haze), and damage to materials. The draft staff paper recommends consideration be given to making secondary fine particle standards consistent with any revisions made to the primary standards.

## **WHAT HAPPENS NEXT**

- The Clean Air Scientific Advisory Committee will review this first draft of the staff paper at a meeting in November 2003.
- In April 2004, the Office of Air Quality Planning & Standards (OAQPS) plans to release a second draft of the staff paper, which CASAC is scheduled to review in July of that year. The second draft will be based on the final version of the Criteria Document, as well as reflecting comments from the CASAC and the public on the first draft Staff Paper., The final Criteria Document is scheduled to be completed by December 2003 and will take into account CASAC and public comments received on the latest draft that was reviewed at a CASAC meeting on August 25-26, 2003.
- OAQPS plans to issue the final staff paper to the Administrator in September 2004.
- Under terms of a May 2003 consent decree, EPA will issue a proposal regarding the particulate matter standards review by March 31, 2005; and a final notice by Dec. 20 of the same year.

## **ADDITIONAL INFORMATION**

- This document is available under “Staff Papers” at [http://www.epa.gov/ttn/naaqs/standards/pm/s\\_pm\\_index.html](http://www.epa.gov/ttn/naaqs/standards/pm/s_pm_index.html)
- You may submit comments electronically, by mail, by facsimile or through hand delivery/courier. Please reference Docket Number OAR-2001-0017 on comments. All comments on the first draft Staff Paper should be submitted by October 28, 2003. Comments on this draft will also be accepted at the November CASAC meeting.

## **ABOUT AIR QUALITY STANDARD REVIEWS**

- The Clean Air Act requires EPA to set national air quality standards for particulate matter and five other pollutants considered harmful to public health and the environment (the other pollutants are ozone, nitrogen oxides, carbon monoxide, sulfur dioxide and lead).
- The law also requires EPA to periodically review the standards to ensure that they provide adequate health and environmental protection, and to update those standards as necessary.
- Such a review is a lengthy undertaking. First, EPA’s Office of Research and Development develops a “criteria document” a compilation and evaluation of the latest scientific knowledge useful in assessing the health and welfare effects of the air pollutant. In developing this document, EPA must consider the advice of the Clean Air Scientific

Advisory Committee (CASAC), and explain any important departure from the committee's recommendations.

- Based on the criteria document, EPA also develops a “staff paper” that helps translate the science into terms that can be used for making policy decisions. The staff paper, prepared by staff in EPA's Office of Air Quality Planning & Standards, includes recommendations to the EPA Administrator about any revisions to the standards needed to ensure that they protect public health with an adequate margin of safety, and that they protect the environment and the public welfare.
- Before either the criteria document or staff paper can be used as the basis for any policy decisions, they undergo rigorous review by the scientific community, industry, public interest groups, the general public and CASAC.
- Based on the scientific assessments in the criteria document and on the information and recommendations in the staff paper, the EPA Administrator determines whether it is appropriate to propose revisions to the standards.

## **BACKGROUND ON THE 1997 REVISIONS TO PARTICULATE MATTER STANDARDS**

- The nation's air quality standards for particulate matter were first established in 1971 and were not significantly revised until 1987, when EPA changed the indicator of the standards to regulate inhalable particles smaller than, or equal to, 10 micrometers in diameter (That's about 1/4 the size of a single grain of table salt).
- Ten years later, after a lengthy review, EPA revised the PM standards, setting separate standards for fine particles (PM<sub>2.5</sub>) based on their link to serious health problems ranging from increased symptoms, hospital admissions and emergency room visits for people with heart and lung disease, to premature death in people with heart or lung disease.
- The 1997 standards also retained but slightly revised standards for PM<sub>10</sub> which were intended to regulate “coarse particles” that ranged from 2.5 to 10 micrometers in diameter. PM<sub>10</sub> measurements, however, contain both fine and coarse particles.
- A number of groups, including the American Trucking Association, sued EPA over the revised standards for particulate matter and the Agency's revised ozone standards. In May 1999, a panel of the U.S. Court of Appeals for the D.C. Circuit, in a split decision, held that the Clean Air Act – as applied in setting the new public health air quality standards for ozone and particulate matter – was unconstitutional as an improper delegation of legislative authority to EPA.

- The Court of Appeals left the ozone and fine particle standards in place but ruled that EPA could not enforce them. However, the Court vacated the revisions to the PM<sub>10</sub> standards, concluding that PM<sub>10</sub> is not a good way to measure coarse particles because it includes fine particles.
- EPA appealed the Court's decision on the constitutional issues to the U.S. Supreme Court. In a landmark decision February 2001, the Supreme Court upheld EPA's authority to set national air quality standards that protect millions of people from the harmful effects of air pollution.
- The Supreme Court also affirmed that the Clean Air Act does not allow EPA to consider cost when setting national ambient air quality standards, but requires EPA to set those air quality standards at levels necessary to protect the public health with an adequate margin of safety and to protect public welfare from adverse effects.
- EPA did not appeal the Court of Appeals decision on the coarse particle standards. The Agency is addressing those standards as part of its current PM standards review.
- In March 2002, following the Supreme Court decision on the constitutional issues, the Court of Appeals rejected all remaining challenges to the 1997 standards. Thus, EPA is now moving forward to implement those standards to protect public health and welfare in a timely manner.