

TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO REGULATIONS FOR THE STATE AMBIENT AIR QUALITY STANDARDS FOR SUSPENDED PARTICULATE MATTER (PM) AND SULFATES

The Air Resources Board (the "Board" or "ARB") will conduct a public hearing at the time and place noted below to consider amendments to regulations contained in sections 70100 and 70200 of title 17, California Code of Regulations, and the adoption of a new section 70100.1 of title 17, California Code of Regulations regarding ambient air quality standards and measurement methods for suspended particulate matter (PM) and sulfates.

DATE: June 20, 2002

TIME: 9:00 a.m.

PLACE: California Air Resources Board
Auditorium
9530 Telstar Avenue
El Monte, CA 91731

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., June 20, 2002, and may continue at 8:30 a.m., June 21, 2002. This item may not be considered until June 21, 2002. Please consult the agenda for the meeting, which will be available at least 10 days before June 20, 2002, to determine the day on which this item will be considered.

This facility is accessible to persons with disabilities. If accommodation is needed, please contact the ARB's Clerk of the Board by June 6, 2002, at (916) 322-5594 or TDD (916) 324-9531 or (800) 700-8326 for TDD calls from outside the Sacramento area to ensure accommodation.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected: Proposed amendments to title 17, California Code of Regulations (CCR), sections 70100 and 70200; and proposed adoption of new section 70100.1.

Background: Section 39606(a)(2) of the Health and Safety Code requires the ARB to adopt ambient air quality standards in consideration of the public health, safety, and welfare, including but not limited to health, illness, irritation to the senses, aesthetic value, visibility interference and the effects of air pollution on the economy. Ambient air quality standards, as defined in section 39014 of the Health and Safety Code, reflect the relationship between the composition and intensity of air pollution to undesirable effects. Ambient standards relating to health effects, including the PM and sulfates standards, are to be based upon the recommendations of the Office of Environmental Health Hazard Assessment

(OEHHA). Existing section 70100 of 17 CCR consists of definitions of ambient air quality standards, and existing section 70200 consists of a table of standards. The proposed amendments would modify the parts of those sections pertaining to suspended particulate matter (PM) and sulfates. In addition, ARB staff is proposing to adopt new section 70100.1 to set forth approved samplers, measurement methods, and instruments for monitoring for compliance with PM standards.

Section 39606(d) of the Health and Safety Code (Children's Environmental Health Protection Act (SB 25, Escutia; Stats. 1999 ch. 731, sec. 3)) required the ARB, in consultation with the OEHHA, to review all California health-based ambient air quality standards to determine if any were inadequate to protect public health, including the health of infants and children. At its December 7, 2000 meeting, the Board approved a report, "Adequacy of California Ambient Air Quality Standards: Children's Environmental Health Protection Act," prepared by ARB and OEHHA staffs. The report concluded that health effects may occur in infants and children and other potentially susceptible subgroups exposed to several criteria pollutants at or near levels corresponding to their current standards. A criteria pollutant is defined as an air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. The report identified the standards for particulate matter (PM), including sulfates, as having the highest priority for review and revision. Section 39606(d) of the Health and Safety Code also requires the Board to revise the highest priority California ambient air quality standard (PM) by December 31, 2002. Due to the importance of the health impacts from PM pollution, the Board directed staff to prepare a proposal for revising the standards for its consideration in spring of 2002.

For the PM and sulfates standards review, ARB and OEHHA staff considered and evaluated new scientific literature regarding the impacts of PM air pollution on public health. The body of evidence reviewed demonstrated associations between health effects and both PM₁₀ and PM_{2.5}. PM₁₀ is defined as suspended PM with a mean aerodynamic radius of 10 microns or less, and PM_{2.5} is defined as fine suspended PM with a mean aerodynamic radius of 2.5 microns or less. The health effects from exposure are significant and include premature death, hospital admissions for cardiopulmonary causes, emergency room visits, acute and chronic bronchitis, asthma attacks, upper respiratory symptoms, work loss, and restricted activity.

The staff's review of the literature determined the following. First, there are compelling reasons to be concerned about significant adverse health effects associated with PM₁₀ exposures occurring at or below the levels defined by the existing standard. Second, there are compelling reasons to be concerned about significant adverse health effects associated with PM_{2.5} exposures, for which no State standards exist. Third, PM and sulfates measurement methods should be updated to reflect more accurately the level of these pollutants in ambient air and the technical improvements in equipment.

A report containing staff's preliminary findings was released to the public on November 30, 2001, titled "Review of California Ambient Air Quality Standards for Particulate Matter and Sulfates, Report to the Air Quality Advisory Committee." This report, which recommended revising the annual average standard for PM10 and establishing a new annual average standard for PM2.5, was reviewed by the Air Quality Advisory Committee (AQAC), an external peer review committee established in accordance with section 57004 of the Health and Safety Code and appointed by the President of the University of California. At a public meeting on January 23 and 24, 2002, the AQAC approved those recommendations, and also recommended that the State establish a 24-hour standard for PM2.5. In response to the AQAC's request, ARB and OEHHA staffs presented a "Draft Proposal to Establish a 24-hour Standard for PM2.5" to the AQAC at a second public meeting on April 3, 2002, which the AQAC approved.

The Children's Environmental Health Protection Act in section 39606(d)(2) of the Health and Safety Code requires that ambient air quality standards be "established at levels that adequately protect the health of the public, including infants and children, with an adequate margin of safety." Accordingly, ARB and OEHHA staffs propose the following revisions to 17, CCR, sections 70100 and 70200, and the creation of a new section 70100.1.

Staff Proposal: Based on a review of the scientific evidence on PM health effects and the recommendations of the OEHHA, ARB staff proposes the following:

- (1) Lower the annual-average ambient air quality standard for PM10, from 30 to 20 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), not to be exceeded. Revise the averaging method to an annual arithmetic mean.
- (2) Establish an annual-average PM2.5 ambient air quality standard of 12 $\mu\text{g}/\text{m}^3$, as an annual arithmetic mean, not to be exceeded.
- (3) Establish a 24-hour PM2.5 ambient air quality standard of 25 $\mu\text{g}/\text{m}^3$, not to be exceeded.
- (4) Adopt "Measurement Method for Particulate Matter in Ambient Air," currently set forth in the "Air Monitoring Quality Assurance Manual," as printed on April 17, 2002, and available from the ARB's Monitoring and Laboratory Division (MLD), as the regulatory measurement method for PM. This method has two parts, "Measurement of PM10" and "Measurement of PM2.5".
- (5) Adopt ARB Method MLD 007, dated April 22, 2002, as the measurement method for sulfates.

In 17, CCR, section 70100 (Definitions), ARB staff propose the following:

- Replace subsection (k) "Total Suspended Particulate Matter" with "Fine Suspended Particulate Matter (PM2.5)." "Sulfates" has been measured based upon the definition for "Total Suspended Particulate Matter," but staff proposes a new sulfates measurement method.
- Revise subsection (j) "Suspended Particulate Matter (PM10)" to reflect updated measurement methods for PM10.
- Revise subsection (p) "Sulfates" to reflect an updated measurement method for sulfates.

In 17, CCR, section 70200 (Table of Standards), ARB staff propose the following:

- Revise the provision for “Suspended Particulate Matter (PM10)” to reflect the proposed 20 $\mu\text{g}/\text{m}^3$ standard, and new measurement methods.
- Add a provision for “Fine Suspended Particulate Matter (PM2.5)” to reflect the proposed PM2.5 standards, and new measurement methods.
- Revise the provision for “Sulfates” to reflect the new measurement method.

ARB staff propose a new section 70100.1, in 17, CCR, titled “Methods, Samplers, and Instruments for Measuring Pollutants.” Section 70100.1 is a listing of specific analytical, and monitoring methods, samplers, and equipment to be used to measure pollutants in the ambient air to determine compliance with the State Ambient Air Quality Standards.

Once the ARB adopts ambient air quality standards that specify a level for clean air, a second phase of regulatory activity will occur as the ARB and the air pollution control and air quality management districts (Districts) develop, propose, and adopt emission standards and other control measures that will reduce emissions from specific source categories of PM and sulfates. The adoption of control measures designed to attain the ambient standards is a separate process conducted in accordance with the public notice and comment rulemaking procedures set forth in the Health and Safety Code and other laws. The ARB is not proposing any control requirements at this hearing.

COMPARABLE FEDERAL REGULATIONS

Two provisions of the federal Clean Air Act (42 USC section 7401 et seq.) govern the establishment, review, and revision of National Ambient Air Quality Standards (NAAQS), sections 108 and 109 (42 USC sections 7408 and 7409). Pursuant to these provisions, the federal Environmental Protection Agency promulgated an ambient standard for PM10 as an annual arithmetic mean of 50 $\mu\text{g}/\text{m}^3$. The EPA also established NAAQS for PM2.5: a 24-hour standard of 65 $\mu\text{g}/\text{m}^3$, and an annual arithmetic mean of 15 $\mu\text{g}/\text{m}^3$. The federal 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

The Federal Reference Method (FRM) for the determination of PM in the atmosphere is described in Title 40, Code of Federal Regulations, Part 50. Appendix L describes the method for PM 2.5, and Appendix M describes the method for PM10. In accordance with federal procedures, staff recommends adoption of the FRM for PM2.5 and PM10 as a sampling method for California.

Section 39606(d)(2) of the Health and Safety Code specifies that “standards shall be established at levels that adequately protect the health of the public, including infants and children, with an adequate margin of safety.” Because federal standards were not established in consideration of this specification, separate State standards may be needed. Also, results from a comprehensive review of the scientific literature conducted by ARB and OEHHA staff showed that

significant adverse health effects can occur from exposure to PM at levels near and below the federal standards. Stricter State standards are needed to protect the health of Californians and meet the requirements of the Children's Environmental Protection Act.

AVAILABILITY OF DOCUMENTS AND CONTACT PERSON

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the Proposed Regulatory Action, which includes a summary of the environmental impacts of the proposal.

Copies of the Staff Report and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations, may be accessed on the ARB's web site listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Environmental Resources Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing. Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the ARB's web site listed below.

Further inquiries concerning the substance of the proposed regulation may be directed to the designated agency contact persons, Mr. Richard Bode, Chief, Health and Exposure Assessment Branch, (916) 323-8413, or Dr. Linda Smith, Manager, Health and Ecosystems Assessment Section, (916) 327-8225.

Further, the agency representative and designated back-up contact persons to whom procedural inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Marie Kavan, Regulations Coordinator, (916) 322-6533. The Board staff has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection at the ARB during regular business hours upon request to the contact persons.

If you are a person with a disability and desire to obtain this document in an alternative format, please contact the Air Resources Board ADA Coordinator at (916) 323-4916, or TDD (916) 324-9531, or (800) 700-8326 for TDD calls outside the Sacramento area.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR when completed, will be available on the ARB Internet site for this rulemaking at www.arb.ca.gov/regact/aaqspm/aaqspm.htm and also at www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm.

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other non-discretionary savings to State or local agencies. Because ambient air quality standards simply define clean air (see sections 39606 and 39014 of the Health and Safety Code), they will have no economic or fiscal impacts. Once ambient standards are adopted by the ARB, local air pollution control or air quality management districts and the Board develop rules and regulations to control air emissions from numerous source categories in order to attain the health-based ambient standards. A number of different emission standards and control measures are possible, and each will have its own economic or fiscal impact. These impacts must be evaluated when each control measure is proposed. Any economic or fiscal impacts associated with the imposition of future measures will be considered by the adopting regulatory agency in a public forum when specific measures are proposed.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. Because the adoption of a health-based ambient standard does not include the imposition of control measures to achieve that standard, the ARB has determined that there are no cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. Although the proposed regulatory action will not result in increased costs to the State, future regulations will be necessary to achieve or maintain the proposed standards. When the ARB proposes to adopt such regulations, any associated costs would need to be explained in accordance with statutory requirements and will be justified by the benefit to human health, public welfare, or the environment.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will have no significant impacts on the creation or elimination of jobs within the State of California, no significant impacts on the creation of new businesses and the elimination of existing

businesses within the State of California, and no significant impacts on the expansion of businesses currently doing business within the State of California.

The Executive Officer has also determined, pursuant to Government Code section 11346.5(a)(3)(B), that the proposed regulatory action will not affect small businesses, because ambient air quality standards simply define clean air, and therefore have no economic impact.

Before taking final action on the proposed regulatory action, the Board must determine that no alternative considered by the agency or that has otherwise been identified and brought to the attention of the agency would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

The public may present comments relating to this matter orally or in writing at the hearing, and in writing or by e-mail before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received **no later than 12:00 noon, June 19, 2002**, and addressed to the following:

Postal mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to: aaqspm@listserv.arb.ca.gov
and received at the ARB **no later than 12:00 noon, June 19, 2002**.

Facsimile transmissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB **no later than 12:00 noon June 19, 2002**.

The Board requests but does not require that 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

STATUTORY AUTHORITY AND REFERENCES

This regulatory action is proposed under that authority granted in Health and Safety Code sections 39600, 39601 and 39606. This action is proposed to implement, interpret and make specific Health and Safety Code sections 39014, 39602, 39606(b), 39701, 39703(f), and 57004.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code.

Following the public hearing, the Board may adopt the regulatory language as originally proposed, or with non-substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result from the proposed regulatory action. Such substantive modifications may include: modifying the definition of a specific pollutant; setting the ambient air quality standards at different levels than proposed; or adopting different measurement methods or averaging times than proposed. If the Board approves any substantive changes to the originally-proposed regulations, the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Air Resources Board, 1001 "I" Street, Environmental Services Center, 1st Floor, Public Information Office, Sacramento, CA 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Michael P. Kenny
Executive Officer

Date: April 23, 2002

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web –site at www.arb.ca.gov.