TITLE 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO REGULATIONS FOR THE STATE AMBIENT AIR QUALITY STANDARD FOR NITROGEN DIOXIDE

The Air Resources Board (the Board or ARB) will conduct a public hearing at the time and place noted below to consider amending its regulations for the state ambient air quality standard for nitrogen dioxide (NO_2). The current ambient air quality standard for NO_2 is 0.25 parts per million (ppm) averaged over 1 hour. Staff is proposing an NO_2 standard of 0.18 ppm averaged over 1 hour; a new annual average NO_2 standard of 0.030 ppm, not to be exceeded; and minor updates to the California Approved Samplers for NO_2.

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DATE: February 22, 2007

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Byron Sher Auditorium, Second Floor
1001 I Street
Sacramento, California 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., February 22, 2007, and may continue at 8:30 a.m., February 23, 2007. This item may not be considered until February 23, 2007. Please consult the agenda for the meeting, which will be available at least 10 days before February 22, 2007, to determine the day on which this item will be considered.

For individuals with sensory disabilities, this document is available in Braille, large print, audiocassette, or computer disk. Please contact ARB's Disability Coordinator at (916) 323-4916 by voice or through the California Relay Services at 711, to place your request for disability services. If you are a person with limited English and would like to request interpreter services, please contact ARB's Bilingual Manager at (916) 323-7053.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected: Proposed amendments to title 17, California Code of Regulations (CCR), sections 70100.1 and 70200, and document incorporated by reference: "Air Monitoring Quality Assurance Manual, Volume IV: Monitoring Methods for the State Ambient Air Quality Standards."

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, and essentially define clean air. Ambient standards relating to health effects, including the NO_2 standard, are to be based upon the recommendations of the Office of Environmental Health Hazard Assessment (OEHHA). Existing section 70100.1 references California approved methods, samplers, and instruments for measuring and determining compliance with the standards; existing section 70200 sets forth the Table of Standards. The proposed amendments would modify the parts of those sections pertaining to NO_2.

Section 39606(d) of the Health and Safety Code (Children's Environmental Health Protection Act (SB25, Escutia; Stats. 1999, ch. 731, sec. 53)) required the ARB, in consultation with the OEHHA, to review all California health-based ambient air quality standards to determine if they are adequate 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" (Adequacy Report), prepared by ARB and OEHHA staffs, which concluded that health effects may occur in infants and children and other potentially susceptible subgroups exposed to several criteria air pollutants at or near levels corresponding to the current standards. "Criteria air pollutants" are defined as air pollutants for which acceptable levels of exposure can be determined and for which ambient air quality standards have been set. The Adequacy Report identified the standard for NO_2 as having a high priority for further detailed review and possible revision. The current ambient air quality standard for NO_2 is 0.25 ppm, averaged over 1 hour.

In response to the Adequacy Report's findings and the Board's direction, ARB and OEHHA staffs began an exhaustive review and evaluation of the scientific literature regarding the impacts of NO_2 air pollution on public health. The body of evidence demonstrated significant associations between health effects and NO_2 at the level of the current standard. The health effects from exposure near 0.25 ppm NO_2 for one hour can be significant to asthmatics, including increased airway reactivity, and enhanced airway inflammatory response after allergen challenge. The health effects from exposure to an annual average of 0.03 ppm NO_2 can also be significant, including premature mortality, emergency room visits for asthma in children, and hospitalization for respiratory and cardiovascular disease. Furthermore, epidemiological studies have shown that long-term exposures to NO_2 at such levels may lead to changes in lung function growth in children, symptoms in asthmatic children, and pre-term birth. In addition, infants and children have disproportionately higher exposure to NO_2 than adults due to their greater ventilation rate and greater exposure duration, and children may be more susceptible to the potential effects of NO_2 on the developing lung.

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." The staff review of the literature determined that there are compelling reasons to be concerned about significant adverse health effects associated with NO_2 exposure; that the one-hour standard is not sufficiently protective; and that a multi-hour standard is also needed. Further, aligning the

state's NO_2 measurement methods with federal methods would allow the same NO_2 measurement data to be acceptable to both state and federal air quality agencies.

Two companion documents – a draft Staff Report containing staff's preliminary findings, and a draft Technical Support Document – were released to the public on April 14, 2006, titled "Review of California Ambient Air Quality Standard for Nitrogen Dioxide." The draft Staff Report, including staff recommendations for establishing a new annual average standard for NO_2, underwent scientific peer review 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. The AQAC held a public meeting on June 12-13, 2006, discussed their review of the draft Staff Report and the draft recommendations, and provided comments for improving the draft Staff Report to the ARB staff. Final AQAC findings were sent on *December 5, 2006*. The Staff Report was revised in response to comments received from the AQAC and the public. The final Staff Report (Initial Statement of Reasons for the proposed regulatory action), which is being released on January 5, 2007, includes the following staff proposal for revising the state ambient air quality standard for NO_2.

Staff Proposal: Based on a review of the scientific evidence on NO_2 health effects and the recommendations of OEHHA, ARB staff proposes the following revisions be made to the California ambient air quality standard for NO_2:

1. NO_2 continues to be the pollutant addressed by the standard.
2. NO_2 1-hour-average standard – lower the 1-hour-average standard for NO_2 from 0.25 ppm to 0.18 ppm, not to be exceeded.
3. NO_2 annual average standard – establish a new annual average standard for NO_2 at 0.030 ppm, not to be exceeded. Three decimal places are included in order to ensure that the standard will provide an adequate margin of safety.
4. Monitoring method – retain the current monitoring method for NO_2, which uses the chemiluminescence method for determining compliance with the state ambient air quality standard for NO_2.
5. Incorporate by reference (in title 17, CCR, section 70101) all federally approved chemiluminescence methods (i.e., samplers) as "California Approved Samplers" for NO_2. This will result in no change in air monitoring practices, but will align state monitoring requirements with federal requirements.

Proposed Changes to Title 17, CCR: To effectuate the above recommendations, ARB staff proposes the following revisions to title 17, CCR, sections 70100.1 and 70200:

1. Amend section 70100.1 (Methods, Samplers, and Instruments for Measuring Pollutants) by adding a new subsection (d), "NO_2 Methods."
2. Amend section 70200 (Table of Standards) by revising the 1-hour average ambient air quality standard for NO_2, by adding provisions for an annual average NO_2 standard, by updating the description of the relevant effects of exposure, and by specifying the use of "California Approved Samplers."

Once ARB revises the ambient air quality standards that specify maximum levels of NO_2 that are consistent with healthy air, a second phase of regulatory activity will occur as ARB and the air pollution control and air quality management districts (districts) develop, propose, and adopt emission standards and other control measures that will apply to specific source categories of NO_2. The adoption of control measures designed to attain the ambient standards is a separate process conducted pursuant to the Health and Safety Code in accordance with the public notice and comment rulemaking procedures set forth in the California Administrative Procedure Act and other laws. ARB is not proposing any control requirements at this hearing.

COMPARABLE FEDERAL REGULATIONS

Sections 108 and 109 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). Pursuant to these provisions, the United States Environmental Protection Agency (U.S. EPA) promulgated an ambient standard for NO_2. For an annual arithmetic mean exposure period, the standard is 0.053 ppm. The ARB staff does not believe this federal standard is sufficiently protective of public health.

Federal methods for measuring ambient concentrations of specified air pollutants have been designated as "reference methods" or "equivalent methods" in accordance with Title 40, Part 53, of the Code of Federal Regulations (40 CFR Part 53), and may be found at the EPA website: http://www.epa.gov/ttn/amtic/files/ambient/criteria/ref0706.pdf. Staff recommends the adoption of these methods for NO_2 as the monitoring methods and samplers 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, staff proposes that separate state standards are needed.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The Board's staff has prepared a Staff Report/Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report consists of two parts. The "Staff Report: Review of the California Ambient Air Quality Standard for Nitrogen Dioxide" includes an overview, staff findings, and the proposed regulatory amendments in Appendix A. The "Technical Support Document: Review of the California Ambient Air Quality Standard for Nitrogen Dioxide" contains non-health topics, such as chemistry, sources and emissions, measurement, exposure, and welfare effects; and health topics, such as controlled human exposure studies, epidemiological studies, and toxicological studies. Copies of these reports 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, Visitors and Environmental

Services Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing February 22, 2007.

After the public hearing and 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.

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 representatives to whom nonsubstantive inquiries concerning the proposed administrative action may be directed are Regulations Coordinators Alexa Malik, (916) 322-4011, and Amy Whiting, (916) 322-6533. The Board 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 upon request to the contact persons.

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on the ARB Internet site for this rulemaking at http://www.arb.ca.gov/regact/no207/no207.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 by public agencies and private persons and businesses 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 Division 4, part 7, title 2 (commencing with section 17500) of the Government Code, or other nondiscretionary costs or savings to state or local agencies.

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. This is because ambient air quality standards simply define clean air (see sections 39606 and 39014 of the Health and Safety Code). Once ambient standards are adopted by 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 air quality 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.

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.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The Executive Officer has also determined, pursuant to Title 1, CCR, section 4, that the proposed regulatory action will not affect small businesses, for the same reasons that it will not result in any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board or that has otherwise been identified and brought to the attention of the Board 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 email 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, February 21, 2007,** 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, CA 95814

Electronic mail is to be sent to: http://www.arb.ca.gov/lispub/comm/bclist.php and **received at the ARB no later than 12:00 noon, February 21, 2007.**

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 February 21, 2007.**

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 Board 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 sections 39600, 39601, 39601(a) and 39606 of the Health and Safety Code. This action is proposed to interpret, implement, and make specific Health and Safety Code sections 39014, 39606, 39701, and 39703(f); and Western Oil and Gas Association v. Air Resources Board (1984) 37 Cal.3d 502.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, division 3, title 2, 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; in such event 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, Visitors and Environmental Services Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Michael N. Scheible

for Catherine Witherspoon
Executive Officer

Date: