

## TITLE 13. CALIFORNIA AIR RESOURCES BOARD

### NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CALIFORNIA CLEANER-BURNING GASOLINE REGULATIONS

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider amendments to the California cleaner-burning gasoline regulations (formally entitled "California Reformulated Gasoline Regulations" or CaRFG). The proposal includes amendments that would (1) rescind in some areas the minimum standard for the oxygen content of gasoline in the winter and (2) increase the maximum limit on the oxygen content allowable under the Predictive Model.

Date: August 27, 1998

Time: 9:30 a.m.

Place: Board Hearing Room, Lower Level  
2020 L Street  
Sacramento, California 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:30 a.m. on August 27, 1998, and may continue at 8:30 a.m. on August 28, 1998. This item may not be considered until August 28, 1998. Please consult the agenda for the meeting, which will be available at least 10 days before August 27, 1998, 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 ARB's Clerk of the Board at (916) 322-5594, or TDD (916) 324-9531, or (800) 700-8326 for TDD calls for outside the Sacramento area by August 12, 1998.

### INFORMATIVE DIGEST OF PROPOSED ACTION/PLAIN ENGLISH POLICY STATEMENT OVERVIEW

#### Proposed Actions and Sections Affected

Proposed amendments to sections 2260 to 2262.7 of Title 13, California Code of Regulations (CCR).

#### Background

The CaRFG regulations were adopted by the Board following a hearing in November 1991 and became applicable in the spring of 1996. The regulations establish a comprehensive set of standards for gasoline designed to achieve the maximum reductions in emissions of criteria pollutants and toxic air contaminants from gasoline-powered motor vehicles. The standards cover sulfur, benzene,

olefin, oxygen, and aromatic hydrocarbon contents, the 50-percent and 90-percent distillation temperatures (T50 and T90), and Reid vapor pressure (RVP).

The CaRFG standards include “cap” limits that apply to finished gasoline throughout the California gasoline distribution system. The standards also include more stringent limits that apply to gasoline when it is first supplied from a production facility (typically a refinery) or an import facility; these will be referred to as the “refiner” limits. The standards are as follows:

Property	Averaging Limit	Flat Limit	Cap
T50	200°F	210°F	220°F
T90	290°F (DAL not to exceed 310°F)	300°F	330°F
Olefins	4.0%	6.0%	10.0%
Aromatics	22.0%	25.0%	30.0%
Sulfur	30 ppm	40 ppm	80 ppm
Benzene	0.80%	1.00%	1.20%
Oxygen	None	1.8 wt.% min. to 2.2 wt.% max.	2.7 wt.% max.
RVP	None	7.00 psi	7.00 psi

Except in the case of RVP and oxygen content, the regulations provide two compliance options for meeting the limits applicable to gasoline being supplied from a production or import facility. One option is to have the gasoline subject to a “flat limit,” which must be met by every gallon of gasoline leaving the production or import facility. The other option is to elect an “averaging limit.” The averaging limits established in the regulations for each of the six properties are more stringent than the comparable flat limits. Under the averaging option, the producer may assign differing “designated alternative limits” (DALs) to different batches of gasoline being supplied from the production or import facility. Each batch of gasoline must meet the DAL for the batch. A producer or importer supplying a batch of gasoline with a DAL above the averaging limit must, within 90 days before or after, supply (from the same facility) sufficient quantities of gasoline subject to more stringent DALs to fully offset the excess over the averaging limit.

The CaRFG regulations also contain a compliance mechanism under which a producer or importer may use the “California Predictive Model” to identify alternative flat and averaging limits applicable when gasoline is supplied from the production or import facility. The Predictive Model provisions, which were adopted in 1994, consist of mathematical equations which estimate the changes in exhaust emissions of hydrocarbons, oxides of nitrogen (NOx), and four toxic air contaminants that result from different gasoline formulations. The four toxic air contaminants are

benzene, 1,3-butadiene, acetaldehyde, and formaldehyde. An alternative gasoline formulation is acceptable if the percent change in emissions is less than or equal to 0.04 percent for hydrocarbons, oxides of nitrogen, and the potency-weighted sum of the toxic air contaminants. No alternative limit may exceed the cap limit for the property.

The standards for oxygen content are administered differently from the rest of the standards. In most cases, CaRFG-compliant gasoline must have an oxygen content between 1.8 weight percent and 2.2 weight percent. However, producers and importers may use the Predictive Model mechanism--or an analogous mechanism in which alternative gasoline formulations are certified based on a vehicle test program--to establish a maximum oxygen content limit as high as 2.7 weight percent. Except in the winter, gasoline formulations meeting the Predictive Model or vehicle testing criteria are allowed to have less oxygen than 1.8 weight percent, including zero oxygen. Alternative formulations with oxygen contents below 1.8 weight percent are not allowable during specified winter oxygen control periods. This was done because the 1990 amendments to the federal Clean Air Act required that the State Implementation Plans (SIPs) for all CO nonattainment areas include a minimum oxygen requirement in the winter months when CO concentrations are the highest (FCAA §211(m)), and California contained eight CO nonattainment areas (along with two unclassified areas). The wintertime oxygen requirements are part of the California SIP, along with the rest of the CaRFG regulations.

The ARB staff has estimated emission reductions from on-road vehicles of 17 percent of hydrocarbons, 11 percent of NO<sub>x</sub>, 11 percent of CO, and 40 percent of potency-weighted toxic emissions for gasoline that exactly complies with the averaging limits. Because actual gasolines are generally somewhat "cleaner" and because they provide unquantified emission benefits such as reducing combustion-chamber deposits, actual emission reductions are believed to be greater.

### **Proposed Amendments**

The staff is proposing that the Board:

1. Increase the "cap" limit for oxygen from 2.7 to 3.5 percent by weight.
2. Rescind in most areas the requirement for at least 1.8 percent oxygen, by weight, in gasoline used in the winter. Ultimately, the requirement would be retained only in the counties of Los Angeles, Orange, Riverside, and Ventura, in compliance with federal law, and in Imperial County, where the state and federal air quality standards for CO continue to be violated. Also, it would be retained through January 31, 2000, in Fresno and Madera Counties, and the Lake Tahoe Air Basin, to ensure maintenance of the state standard for CO.
3. Make minor technical changes:
  - Correct drafting errors in the existing provisions on averaging.
  - Make the application of the RVP limit to gasoline shipped from northern refineries to southern marine terminals uniform with its application to gasoline imported from out-of-state.

- Exempt racing fuel from the CaRFG standards.
- Make non-substantive edits for clarity and uniformity.

### **Comparable Federal Regulations.**

The 1990 amendments to the federal Clean Air Act (FCAA) require U. S. Environmental Protection Agency (U.S. EPA) to adopt regulations regarding reformulated gasoline. (FCAA §211(k).) U.S. EPA has adopted these regulations as 40 C.F.R. §§80.40 to 80.82. In California, they apply in San Diego county, the greater Los Angeles Area (Los Angeles, Orange and Ventura counties, and parts of Riverside and San Bernardino counties), and the greater Sacramento area (Sacramento county and parts of Yolo, Solano, Sutter, Placer, and El Dorado counties).

The FCAA provides that the federal regulations must require no NOx increase, a minimum 2.0 percent by weight oxygen content (with certain exceptions), a maximum 1.0 percent by volume benzene content, and limits on heavy metals. The federal regulations must also specify performance standards for hydrocarbons in the high ozone period and toxic compounds year-round in two phases--the first starting in 1995 and the second starting in 2000. The U.S. EPA regulations identify "per-gallon" and optional averaged standards that may be met under a "simple model" through 1997. The regulations also identify a "complex model" which is optional until January 1, 1998, and is mandatory thereafter.

While the federal substantive requirements will apply in the covered areas of southern California, the ARB has worked with U.S. EPA and gasoline producers to avoid unnecessary duplication of the enforcement requirements. In 40 C.F.R. §80.81, U.S. EPA has exempted California producers from many of the federal enforcement requirements from March 1, 1996, to January 1, 2000, as long as certain criteria are met.

### **AVAILABILITY OF DOCUMENTS AND CONTACT PERSON**

The Board staff has prepared a Staff Report which includes the Initial Statement of Reasons for the proposed action and a summary of the environmental and economic impacts of the proposal, if any. Copies of the Staff Report and the full text of the proposed regulatory language may be obtained from the Public Information Office, Air Resources Board, 2020 L Street, Sacramento, California 95814, (916) 322-2990. The Board staff has compiled a record which includes all information upon which the proposal is based. This material is available for inspection upon request to the contact person identified immediately below. The ARB has determined that it is not feasible to draft the regulation amendments in plain English due to the technical nature of the regulation; however, a plain English summary of the proposed regulation is available from the agency contact person named in this notice, and is also contained in the Staff Report for this regulatory action.

Further inquiries regarding this matter should be directed to Mr. Dean C. Simeroth, Chief, Criteria Pollutants Branch, Stationary Source Division, at (916) 322-6020.

## **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 regulatory action are presented below.

The Executive Officer has determined that the proposed regulatory action will not create costs or savings, as defined in Government Code section 11346.5(a)(6), 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 17501, Division 4, Title 2) of the Government Code, or other nondiscretionary savings to local agencies.

In preparing the regulatory proposal, the staff has considered the potential economic impacts on California business enterprises and individuals. Overall, we expect the amendments to have beneficial economic impacts as compared to the existing cleaner-burning gasoline requirements. Most of the amendments will provide some degree of increased flexibility in meeting the cleaner-burning gasoline standards. Thus the proposed amendments are not expected to have a significant adverse economic impact on large or small businesses, including the ability of California businesses to compete with businesses in other states, or on directly affected private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action should have minor, if any, impact on the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within California, or the expansion of businesses currently doing business within California. An assessment of the economic impacts of the proposed regulatory action can be found in the Staff Report.

The Executive Officer has also determined, pursuant to Government Code section 11343.2, that the proposed regulatory action will affect small business.

Before taking action on the proposed regulatory action, the Board must determine that no alternative considered by 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. To be considered by the Board, written submissions must be addressed to and received by the Clerk of the Board, Air Resources Board, Post Office Box 2815, Sacramento, California 95812, no later than 12:00 noon, August 26, 1998, or received by the Clerk of the Board at the hearing.

The Board requests but does not require that 20 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing. 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 HEARING PROCEDURES

This regulatory action is proposed under that authority granted in sections 39600, 39601, 43013, 43018, and 43101, Health and Safety Code, and Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975). This regulatory action is proposed to implement, interpret, and make specific sections 39000, 39001, 39002, 39003, 39010, 39500, 39515, 39516, 41511, 43000, 43016, 43018, 43021, and 43101, Health and Safety Code, and Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

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 nonsubstantial 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 Board's Public Information Office, 2020 L Street, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD



for Michael P. Kenny  
Executive Officer

Date: June 30, 1998