

State of California  
**AIR RESOURCES BOARD**

Final Statement of Reasons for Rulemaking  
Including Summary of Comments and Agency Responses

**PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE  
CALIFORNIA CLEANER-BURNING GASOLINE REGULATIONS**

Public Hearing Date: August 27, 1998  
Agenda Item No.: 98-9-2

**I. GENERAL**

This rulemaking was initiated by the publication on July 10, 1998 of a notice for an August 27, 1998 public hearing to consider amendments to the California Phase 2 Reformulated Gasoline (CaRFG) regulations, also known as “cleaner burning gasoline” regulations. A Staff Report: Initial Statement of Reasons for Proposed Rulemaking was also made available for public review and comment on July 10, 1998. The Staff Report, which is incorporated by reference herein, contained the text of the regulatory amendments as initially proposed by the staff, along with an extensive description of the rationale for the proposal.

The staff proposal consisted of three elements: (1) elimination in most of the state of the requirement for at least 1.8 percent by weight (wt.%) oxygen in gasoline sold in the wintertime, so that the requirement would remain permanently in the counties of Los Angeles, Orange, Riverside, San Bernardino, Ventura and Imperial only, and would remain through January 31, 2000, in Fresno and Madera counties and the Lake Tahoe Air Basin only; (2) an increase of the maximum oxygen content “cap” limit from 2.7 to 3.5 wt.% year-round; and (3) several minor technical amendments. These changes would be effected by amendments to California Code of Regulations (CCR), title 13, sections 2260-2262.7 and 2265, and to the “California Procedures for Evaluating Alternative Specifications for Phase 2 Reformulated Gasoline Using the California Predictive Model,” which is incorporated by reference in section 2265(a)(2).<sup>1</sup>

Most of the discussion at the August 27, 1998 hearing involved the proposal to raise the oxygen cap limit from 2.7 to 3.5 wt.%. Under U.S. Environmental Protection Agency (U.S. EPA) regulations, ethanol is the only oxygenate allowed in gasoline at levels that add more than 2.7 wt.% oxygen. A 3.5 wt.% maximum oxygen content limit would permit the use of up to

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The amendment to the Predictive Model Procedures simply revised the list of cap limits to reflect the proposed amendment to section 2262.5(b) increasing the maximum oxygen cap limit from 2.7 to 3.5 wt.%.

10 percent by volume (vol.%) ethanol. One of the effects of using ethanol in gasoline is that the presence of more than about 2 to 3 percent ethanol will raise the Reid vapor pressure (RVP) of the gasoline — a higher RVP value means the gasoline has a greater propensity to evaporate — by about 1 pound per square inch. Health and Safety Code section 43830(g) exempts gasoline containing at least 10 vol.% ethanol from the ARB's summertime RVP standard unless the Board finds that a blend of gasoline oxygenated with 10 vol.% ethanol under the RVP exemption and otherwise meeting the CaRFG standards will result in a net increase in the ozone forming potential of the total emissions, excluding emissions of NO<sub>x</sub>, compared to the total emissions excluding emissions of NO<sub>x</sub> from the same automobile fleet operating on fully complying CaRFG that contains 2.0 wt.% oxygen from an oxygenate other than ethanol. This finding is to be based on independently verifiable automobile exhaust and evaporative emission tests performed on a representative fleet of automobiles.

Some Board members expressed concern about triggering the RVP exemption for gasoline containing 10 vol.% ethanol, with the resulting increase in mass evaporative emissions, before having the opportunity to consider whether to make the Health and Safety Code section 43830(g) finding that would eliminate the RVP exemption. The staff had indicated that it was evaluating the results of a recently completed 12-car test program comparing the exhaust and evaporative emissions from vehicles operating on 10 vol.% ethanol with an RVP exemption and the emissions from same vehicles operating on fully complying CaRFG with 2.0 vol.% oxygen from MTBE, along with other emission test data. There had been insufficient time following completion of the 12-car test program for staff to provide a full report at the August 27, 1998 Board meeting on its evaluation of the test data relevant to the emissions associated with the RVP exemption. However, the staff advised that it plans to report at the Board's December 10, 1998 meeting on the emissions impact of the RVP exemption, and to recommend whether the Board should at that time make the Health and Safety Code section 43830(g) finding.

After considering the testimony from interested parties at the August 27, 1998 hearing, the Board unanimously approved Resolution 98-37, in which the Board adopted all of the amendments proposed by staff, except for the increase of the maximum oxygen cap in section 2262.5(b), title 13, CCR and the conforming amendment to the Predictive Model Procedures reflecting the change in the oxygen cap. Since there were no changes in the adopted amendments compared to the amendments originally proposed other than that the Board postponed the separable amendments to section 2262.5(b) and the Predictive Model Procedures, no 15-day notice for supplemental comment was necessary. The Board continued consideration of the amendment raising the maximum oxygen content cap to the Board's December 10, 1998 meeting, at which time the public will be afforded an additional opportunity to comment.

The CaRFG regulations are part of California's State Implementation Plan (SIP) approved by U.S. EPA pursuant to Clean Air Act section 110. For all state law purposes, the amendments will become effective 30 days after filing with the Secretary of State or such earlier date specified by the Office of Administrative Law (OAL) at the ARB's request on a showing of good cause (the ARB is requesting that the amendments be effective upon filing with the Secretary of State

pursuant to Government Code section 11343.4). In Resolution 98-37 the Board directed the Executive Officer to submit the amendments to U.S. EPA as a revision to the California SIP, and to take whatever actions are necessary to assure prompt approval of the SIP revision by U.S. EPA.

**Fiscal Impacts.** The Board has determined that the amendments adopted August 27, 1998 will not result in a mandate to any local agency or school district, the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code.

**Consideration of Alternatives.** The Board has determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

## II. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES

During the 45-day public comment period, the Board received written comments from the American Methanol Institute (AMI), the Western States Petroleum Association (WSPA), and Chevron Products Company (Chevron). At the public hearing, oral comments were provided by AMI, WSPA, Chevron, the National Resources Defense Counsel (NRDC), the Coalition for Clean Air, and Tom Koehler representing the ethanol industry.

WSPA and Chevron supported adoption of the staff proposal. Mr. Koehler in particular supported the proposal to raise the maximum oxygen content cap to 3.5 wt.%. Set forth below is a summary of each objection or recommendation specifically directed at the proposed action or to the procedures followed by the ARB in proposing or adopting the action, together with the agency response.

1. **Comment:** We are concerned by the proposal to raise the maximum oxygen cap to 3.5 wt.% at this time because such a change would trigger a statutory RVP exemption for ethanol blends created in 1991 but made inapplicable by the existing predictive model. This outcome is not consistent with the ARB's pledge to maintain "emissions equivalence" in the CaRFG flexibility process. Nor is it sound economic or regulatory practice, since no single oxygenate or gasoline formulation should be exempt from California's clean air standards. It is also unnecessary. The Staff Report should have disclosed and analyzed the potential increase in hydrocarbon and benzene emissions that could result from the RVP exemption. Because of these considerations, we propose that the Board should continue this hearing until staff is prepared to make the necessary finding. (AMI)

Immediate action on raising the maximum oxygen content prior to considering the RVP exemption finding would be premature. (Coalition for Clean Air)

The Board should hold off on increasing the maximum oxygen content cap and take it up again in December. (NRDC)

Agency Response: As discussed above, the Board decided to postpone consideration of the proposal to raise the maximum oxygen content cap to the December Board meeting. At that time the staff will also make a recommendation whether the Health and Safety Code section 43830(g) finding should be made.

2. Comment: To achieve the full benefits of your action for the wintertime oxygenate season commencing in 5 weeks on October 1, 1998, the final steps to fully implement the rescission must also take place as soon as possible. Several steps must be taken. The most critical is for U.S. EPA to confirm that it approves of the immediate effectiveness of your action. To accomplish these steps, we suggest that you clearly resolve to:

Authorize and direct the Executive Officer to promptly take all necessary or appropriate actions to achieve the full and immediate effectiveness of the rescission of the winter minimum oxygen requirements in the CO attainment areas of the state as soon as possible, including promptly obtaining U.S. EPA's approval and notifying fuel suppliers.

(Chevron)

We urge the Board to direct staff to submit the necessary documents quickly to complete the state steps, including an expedited submittal to OAL. And a revision to the SIP, as needed, should be filed immediately with U.S. EPA with a request that it be approved as quickly as possible. (WSPA)

Agency Response: The language requested by Chevron has been included in Resolution 98-37. The staff is processing the documents as quickly as possible. We are requesting that the amendments become effective upon filing with the Secretary of State and that OAL perform an expedited review.

3. Comment: We agree that it is appropriate to grant racing fuel an exemption from the CaRFG regulations when it is used in an off-road setting. It should be recognized, however, that racing fuel, when used in spark ignition engines is still gasoline and should be evaluated the same way as all other gasolines. Off-road vehicles may require special gasoline because of their engine, and as a result certain fuel parameters may exceed California regulations. The special nature of the application and the emissions impact should be the basis for the exemption, not the relatively small volumes sold. (WSPA)

Agency Response: The rationale for exempting gasoline used only to fuel racing vehicles is set forth on page 12 of the Staff Report. The exemption necessarily only applies to racing fuel that is gasoline.