

TITLES 13 and 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER REGULATORY AMENDMENTS EXTENDING THE CALIFORNIA STANDARDS FOR MOTOR VEHICLE DIESEL FUEL TO DIESEL FUEL USED IN HARBORCRAFT AND INTRASTATE LOCOMOTIVES

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider the proposed adoption of a fuels regulation and an airborne toxics control measure (ATCM) that would extend the applicability of the California standards for motor vehicle diesel fuel regulations to diesel fuel used in commercial and recreational harborcraft and intrastate diesel-electric locomotives. The proposed fuels regulation and ATCM would apply to diesel fuel sold for use in commercial and recreational harborcraft within the boundaries of the South Coast Air Quality Management District (SCAQMD) beginning January 1, 2006. They would apply statewide to diesel fuel sold for use in commercial and recreational harborcraft and intrastate diesel-electric locomotives beginning January 1, 2007. Operators of intrastate diesel-electric locomotives would be permitted to use an Alternative Emission Control Plan if approved by the ARB's Executive Officer.

DATE: November 18, 2004

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Central Valley Auditorium
Air Resources Board
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. on Thursday, November 18, 2004, and may continue at 8:30 a.m. on Friday, November 19, 2004. This item may not be considered until Friday, November 19, 2004. Please consult the agenda for the meeting, which will be available at least ten days before November 18, 2004, to determine the day on which this item will be considered.

If you have a disability-related accommodation need, please go to <http://www.arb.ca.gov/html/ada/ada.htm> for assistance or contact the ADA Coordinator at (916) 323-4916. If you are a person who needs assistance in a language other than English, please contact the Bilingual Coordinator at (916) 324-5049. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT

OVERVIEW

Sections Affected: Proposed adoption of section 2299, and amendments to sections 2281, 2282, and 2284, title 13, California Code of Regulations (CCR); proposed adoption of section 93116, title 17, CCR.

Background

ARB administers regulations that since 1993 have limited statewide the allowable sulfur content of motor vehicle diesel fuel to 500 parts per million by weight (ppmw) and the aromatic hydrocarbon content to 10 percent with a 20 percent limit for small refiners. The regulation limiting aromatic hydrocarbon content allows refiners to comply by selling a certified alternative formulation that has an aromatic hydrocarbon content greater than the basic limits. Most refiners have taken advantage of the regulation's flexibility to produce alternative diesel formulations that provide the required air quality benefits at a lower cost. Diesel fuel meeting the ARB's standards is often referred to as "CARB diesel."

The California diesel fuel regulations are a necessary part of the state's strategy to reduce air pollution through the use of clean fuels and lower emitting motor vehicles and off-road equipment. The use of ultra-low sulfur diesel fuels reduces emissions for in-use engines and enables the use of sophisticated aftertreatment devices necessary to reduce the public exposure to diesel particulate matter. The most recent proposed and adopted standards for diesel engines will require the use of ultra-low sulfur diesel fuel to be effective.

In July 2003, the Board approved amendments – now in effect – which lowered the allowable sulfur content of motor vehicle diesel fuel to 15 ppmw starting June 2006 and retained the existing aromatic hydrocarbon content limit for motor vehicle diesel fuel. California's motor vehicle diesel fuel regulations were already applicable to on-road and off-road vehicular sources and, as part of the July 2003 regulatory amendments, a separate ATCM was adopted making diesel fuel used for most nonvehicular sources subject to the standards for motor vehicle diesel fuel. Further, provisions were included to ensure there were adequate standards for diesel fuel lubricity. However, diesel fuel for locomotives and marine vessels was specifically exempted from the July 2003 amendments. At the July 2003 public hearing, the Board directed staff to evaluate the feasibility, and if appropriate, develop recommendations to extend applicability of California's motor vehicle diesel fuel regulations to locomotives and marine vessels.

As discussed below, the U. S. Environmental Protection Agency (U.S. EPA) administers a 500 ppmw sulfur standard for on-road motor vehicle diesel fuel. In addition this fuel is to have a cetane index of at least 40 or have an aromatic hydrocarbon content of no greater than 35 percent by volume (vol. %). Starting June 2006, the federal sulfur standard for diesel fuel for on-road motor vehicles will be 15 ppmw. Diesel fuel meeting U.S. EPA's

sulfur standards for on-road motor vehicles but not ARB's low-aromatics standard is often referred to as "EPA diesel."

In August 1998, ARB identified particulate matter emitted from diesel engines (diesel PM) as a Toxic Air Contaminant (TAC) and in September 2001, approved the Diesel Risk Reduction Plan to reduce public exposure to diesel particulate matter. The plan identified air toxic control measures and regulations that will set more stringent emissions standards for new diesel-fueled engines and vehicles, establish retrofit requirements for existing engines and vehicles where determined to be technically feasible and cost-effective.

Although ARB's vehicular diesel fuel standards currently do not apply to diesel fuel used in intrastate diesel-electric locomotives and most marine diesel engines, most diesel fuel currently used in those engines has a sulfur content under 500 ppmw. Because of fuel availability and other factors, almost all of the diesel fuel used in intrastate diesel-electric locomotive engines in California is either CARB diesel or EPA diesel, with a majority of it being CARB diesel. Passenger-fleet (i.e., ferries and excursion marine vessels) marine diesel engines are required by statute to use CARB diesel fuel. However, harborcraft that generally operate within California coastal waters primarily use EPA diesel, with lesser amounts of CARB diesel.

The Proposed Amendments

The proposed amendments would apply to persons selling or supplying diesel fuel for use in intrastate diesel-electric locomotives and both commercial and recreational harborcraft. An intrastate diesel-electric locomotive would be defined as a diesel-electric locomotive that annually operates at least 90 percent of the time within the borders of the California, based on hours of operation, miles traveled, and fuel consumption. Harborcraft are marine vessels with characteristics that distinguish them from large oceangoing ships – they would be defined as marine vessels meeting all of the following criteria: (1) less than 400 feet in length; (2) less than 10,000 gross tons; (3) propelled by engines with a cylinder displacement less than 30 liters per cylinder; and (4) neither a foreign-flagged vessel, nor documented as a foreign trade vessel by the United States Coast Guard.

Diesel fuel sold, supplied, or offered for sale for use in commercial or recreational harborcraft within the SCAQMD be required to be CARB diesel beginning January 1, 2006. This earlier implementation date for the SCAQMD is proposed to satisfy emission reduction commitments for harborcraft in the 2003 Statewide Strategy of the California State Implementation Plan.

Diesel fuel sold, supplied, or offered for sale for use in intrastate diesel-electric locomotive and harborcraft operators throughout the state would be required to be CARB diesel beginning January 1, 2007. To provide flexibility to affected diesel-electric locomotive operators, staff is also proposing that operators of intrastate diesel-electric locomotives be permitted to participate in an Alternative Emission Control Plan. The owner or operator of an intrastate diesel-electric locomotive could submit, for approval by the Executive Officer,

a substitute fuel and/or emission control strategy that achieves equivalent or greater reductions than those achieved solely through the use of CARB diesel and that has adequate enforcement provisions. It is expected that operators could propose any combination of fuels, equipment, or operational changes at one or more of their rail facilities in the State. Any plan would have to contain adequate protections for individuals living in areas that have existing local air pollution or localized air toxic impacts.

Under the approach proposed by staff, the Board would adopt a regulation applicable to diesel fuel used in intrastate locomotives and harborcraft pursuant to its Health and Safety Code section 43013 authority to adopt standards and regulations for locomotives and marine vessels. The Board would also adopt identical provisions as an ATCM which would complement and enable the use of high-efficiency emission control devices for non-vehicular diesel engines to reduce emissions of diesel PM.

ARB staff has estimated that the proposed amendments, when fully implemented in 2007, will provide statewide emission reductions of about 2 tons per day (tpd) NO_x, about 1.7 tpd of oxides of sulfur (SO_x), and about 0.6 tpd of diesel PM (both directly and indirectly emitted). Staff has calculated that the cost-effectiveness of the proposed regulatory action ranges between \$1.10 and \$1.60 per pound of NO_x plus particulate matter reduced. This is in the range of other recent criteria pollutant control measures approved by the Board.

COMPARABLE FEDERAL REGULATIONS

Since 1993, a U.S. EPA regulation – 40 C.F.R. §§ 80.29 – has imposed a maximum sulfur content limit of 500 ppmw on diesel fuel sold or supplied for use in on-road motor vehicles. In addition, on-road motor vehicle diesel fuel is required to have either a cetane index of at least 40 or an aromatic hydrocarbon content of no greater than 35 percent by volume. In January 2001, U.S. EPA published a final rule requiring refiners to meet a maximum sulfur standard of 15 ppmw for highway diesel fuel beginning June 1, 2006. (66 F.R. 5002; 40 C.F.R. §§ 80.500 et seq.). All 2007 and later model year diesel fueled vehicles must be fueled with this new low sulfur diesel.

On June 29, 2004, U.S. EPA published a final rule imposing a 500 ppmw maximum sulfur standard for diesel fuel used in nonroad, locomotive, and marine engines, starting in June 2007 (69 F.R. 38958, 40 C.F.R. §§ 80.510 et seq.). The federal sulfur standard drops to 15 ppm starting June 2010 for diesel fuel used in most nonroad engines, and starting June 2012 for diesel fuel used in locomotives and marine vessels.

Under the proposed amendments, California would receive the benefits of five years of use of ultra-low sulfur (15 ppmw) diesel fuel before the U.S. EPA regulations become applicable to diesel fuel used in locomotives and marine vessels. In addition, the U.S. EPA diesel fuel programs do not achieve the NO_x and particulate matter emission reductions provided by the aromatic hydrocarbon requirements for CARB diesel.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The ARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the environmental and economic impacts of the proposal and supporting technical documentation. The report is entitled "Proposed Amendments to Extend the Applicability of the California Motor Vehicle Diesel Fuel Regulations to Commercial and Recreational Harbor Craft and Intrastate Locomotives."

Copies of the ISOR 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, Visitors and Environmental Services Center, First Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing (November 18, 2004).

Upon its completion, the Final Statement of Reasons (FSOR) will also 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 regulations may be directed to the designated agency contact persons: Mr. Erik C. White, Manager, Engineering Evaluation Section, (916) 324-8029, or Mr. Dean C. Simeroth, Chief, Criteria Pollutants Branch, Stationary Source Division, at (916) 322-6020.

Further, the agency representative and designated back-up contact persons to whom nonsubstantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Amy Whiting, 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 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/carblohc/carblohc.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, 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 Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other nondiscretionary 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.

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.

It is expected that the proposed amendments may have a small impact and modify existing diesel production and consumption patterns in California. In evaluating the potential costs of the proposed amendments, staff has considered the likely diesel fuels expected to be generally available in California in 2007. Based on the fact that diesel-electric intrastate locomotive and harborcraft operators would in any event likely use, at a minimum, EPA diesel meeting a 15 ppmw sulfur limit, staff has determined the costs of the proposed amendments based on the incremental cost in 2007 to produce CARB diesel relative to EPA diesel. Staff estimates that the incremental cost to produce CARB diesel relative to EPA diesel beginning in 2007 will be about 3 cents per gallon. This cost represents the incremental diesel fuel production cost to reduce the aromatic hydrocarbon content of U.S. EPA on-road diesel fuel from a limit of 35 volume percent to a limit of 10 volume percent (or an equivalent formulation limit). Staff expects that the total incremental cost increase will be \$2-3 million annually.

Staff has also identified several cost benefits to diesel fuel end users from the proposed amendments that have not been quantified in the above production cost estimates. These benefits will be felt both initially and over the course of the life of the program. Initially, diesel fuel users are expected to see a decrease in engine wear as a result of low sulfur diesel fuel. In addition, lower sulfur fuels should increase the life of diesel engine lubrication oil, as fuel sulfur tends to increase the acidification of engine lubricating oils resulting in loss of pH control. By reducing the diesel fuel sulfur content, it is expected that the interval between oil changes can be extended, leading to a cost saving to diesel engine operators.

The overall economic impacts on operators of intrastate diesel-electric locomotives and harborcraft were also evaluated. For large intrastate diesel-electric locomotive operators (Class I railroads), the use of CARB diesel could reduce operating income by less than 0.02 percent. For smaller (Class III railroads), the use of CARB diesel could reduce operating costs by up to one percent. For commercial fishing operations and tugboat operations, the use of CARB diesel fuel could reduce the average return on owners' equity

by less than one percent and four to seven percent, respectively. These are not expected to be significant adverse economic impacts.

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 Staff Report (ISOR).

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will affect small businesses. The proposed amendments are expected to result in an increase in the cost of producing diesel fuel for use in intrastate diesel-electric locomotives and harborcraft. This increase in diesel fuel production costs may translate into an increase in the price intrastate diesel-electric locomotives and harborcraft operators pay for diesel fuel. Smaller Class III railroad operators, commercial fishing operators and tugboat operators represent the small businesses affected by the proposed amendments. Staff's economic analysis showed that the proposed amendments are not expected to have a significant adverse economic impact on these operations.

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, November 17, 2004**, 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: carbloh@listserv.arb.ca.gov and received at the ARB **no later than 12:00 noon, November 17, 2004**.

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**, November 17, **2004**.

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 sections 39600, 39601, 39650, 39658, 39659, 39666, 39667, 41511, 43013, 43018, 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, 39500, 39515, 39516, 39650, 39658, 39659, 39666, 39667, 41511, 43000, 43013, 43016, 43018, and 43101, Health and Safety Code; title 17, CCR section 93000; and *Western Oil and Gas Ass'n. v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

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; 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

/s/
Catherine Witherspoon
Executive Officer

Date: September 21, 2004

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.