

State of California
AIR RESOURCES BOARD

Resolution 81-47

July 30, 1981

Agenda Item: 81-14-1

WHEREAS, the Air Resources Board ("Board") has established air quality standards for sulfur dioxide (SO₂), sulfates and suspended particulate matter, as well as for visibility-reducing particles;

WHEREAS, the Environmental Protection Agency (EPA) has also adopted health-related national ambient air quality standards (NAAQS) for SO₂ and suspended particulate matter;

WHEREAS, Health and Safety Code Section 39602 requires the State Implementation Plan to include only those measures necessary to meet the requirements of the Clean Air Act;

WHEREAS, the Clean Air Act (42 USC Section 7401 et seq.; see Sections 7410 and 7502) requires the state to attain and maintain the NAAQS for SO₂ and suspended particulate matter by December 31, 1982, through the adoption and implementation of all reasonably available control measures as expeditiously as practicable;

WHEREAS, the Board is authorized, pursuant to the authority set forth in Health and Safety Code Sections 39002, 39600, 39602, 43013, and 43101, to adopt regulations governing the composition of motor vehicle emissions; and such regulations are necessary in order to implement, interpret, or make specific Health and Safety Code Sections 39000, 39001, 39003, 39606, and 43000;

WHEREAS, Health and Safety Code Section 39605 permits the Board to provide any assistance to any district;

WHEREAS, the South Coast Air Quality Management District has included, as a measure in its subsequently ARB-approved non-attainment plan, the control of the sulfur content of motor vehicle diesel fuel;

WHEREAS, the South Coast Air Quality Management District Board by Resolution 78-37 requested the Air Resources Board to adopt a regulation to limit the sulfur content of diesel fuel for use in motor vehicles to 0.05 percent by weight (500 ppm) and reaffirmed that commitment at the April 22 and 23, 1981 ARB public hearings;

WHEREAS, the California Environmental Quality Act and Air Resources Board regulations require that an activity not be adopted as proposed if feasible alternatives or other measures are identified which can be incorporated into the proposal to substantially mitigate any adverse environmental impact, if any;

WHEREAS, the Board has held two duly noticed public hearings on this matter, and has heard and considered the comments presented by representatives of the ARB, districts, affected industries, and other interested persons and agencies; and

WHEREAS, the Board finds:

That the state 24-hour ambient air quality standard for sulfur dioxide has been consistently violated over the past years in California, particularly in the South Coast Air Basin;

That the state 24-hour ambient air quality standard for sulfates has been consistently violated over the past years in California, particularly in the South Coast Air Basin;

That sulfates are a substantial part of total suspended particulates, and sulfates significantly reduce visibility;

That the national and state standards for particulate matter and the state standard for visibility-reducing particles have been consistently violated over the past years in California, particularly in the South Coast Air Basin;

That the Board currently regulates the sulfur content of unleaded gasoline in order to reduce motor vehicle emissions as set forth in 13 CAC Section 2252(a), which specifies that the current sulfur content limit for unleaded gasoline is 0.04 percent by weight, and will become 0.03 percent by weight on January 1, 1982;

That sulfur compounds in diesel fuel contribute significantly to the amount of SO₂, sulfates, suspended particulate matter, and visibility-reducing particles in the air, both as products of combustion and as secondary products of atmospheric chemical reactions;

That emissions of sulfur compounds from the combustion of diesel fuel in motor vehicles are expected to increase significantly over the next ten years because of the anticipated rapid penetration of diesel-powered motor vehicles into the new vehicle sales market and are expected to account for approximately 24 percent of all sulfur oxide emissions in the South Coast Air Basin in 1990;

That a reduction in the sulfur content of diesel fuel will reduce the quantity of sulfur-bearing air contaminants which are emitted from vehicles which use diesel fuel;

That (with the exception of small refiners' production) reduction of the sulfur content of diesel fuel in the South Coast Air Shed to 0.05 percent sulfur by weight will result in a refinery weighted average cost of approximately \$1.38 per pound of SO₂ removed and hence is a cost-effective measure;

That a reduction of the sulfur content of diesel fuel to 0.05 percent by weight is technologically feasible and readily available;

That a reduction of the sulfur content of diesel fuel to 0.05 percent by weight (approximately an 80 percent reduction) will significantly reduce ambient concentrations of sulfur dioxide and sulfates and will significantly improve visibility. In addition, ambient concentrations of suspended particulate matter will be reduced;

That the improvement in air quality attributable to the reduction in sulfur compound emissions from motor vehicles is expected to result in substantial health benefits;

That the overall air quality benefits of the regulation from reduced health and materials damage are economically significant;

That this action amending Board regulations is necessary and appropriate to attain and maintain separately and independently each of the state and national ambient air quality standards referred to above which are violated in the South Coast Air Basin;

That the problems of inter-basin air transfer and pollutant mixing between the South Coast Air Basin and Ventura County are well known and documented and that therefore any regulation limiting the sulfur content of diesel fuel should be applicable throughout the entire South Coast Air Shed, i.e., the South Coast Air Basin and Ventura County;

That there are a sufficient number and variety of refiners who produce and/or market diesel fuel in the South Coast Air Shed to ensure that adequate supplies of both vehicular diesel fuel and non-vehicular diesel fuel will be available in the South Coast Air Shed under this regulation;

That the Board has examined both the direct and indirect costs to the public of adopting this regulation and has determined that those costs are justified by the emissions reductions which will result from the regulation;

That an exemption for small refiners in the South Coast Air Shed from a regulation to control the sulfur content of motor vehicle diesel fuel to 0.05 percent by weight is necessary to prevent an undue economic hardship on such refiners;

That the February 9, 1981 and June 12, 1981 staff reports, the Response to Significant Environmental Issues dated July 30, 1981, and the information presented at the April 22 and 23, 1981 Board hearings and July 29 and 30, 1981 Board hearings adequately address the environmental issues and other impacts associated with this proposed regulation and that the Board concurs in the staff's finding that no significant adverse environmental or other impacts are likely to result from adoption and implementation of the proposed regulation.

NOW, THEREFORE BE IT RESOLVED, that the Board amends Title 13, California Administrative Code, Chapter 3, Subchapter 5, Section 2252, to add a regulation limiting the sulfur content of diesel fuel for use in motor vehicles in the South Coast Air Basin and Ventura County as set forth in Attachment A to this Resolution.

I certify that the above is a true and correct copy of Resolution 81-47, as adopted by the Air Resources Board


Sally Rump, Board Secretary

ATTACHMENT A

REGULATION TO CONTROL THE SULFUR CONTENT
OF MOTOR VEHICLE DIESEL FUEL IN THE SOUTH COAST
AIR BASIN AND VENTURA COUNTY

2252. Sulfur Content

(a) No person shall sell, offer for sale, or deliver for sale at retail in California, any unleaded gasoline which has a sulfur content greater than 400 parts per million by weight after November 13, 1978, or greater than 300 parts per million by weight after January 1, 1982.

(b) The maximum sulfur content limitations specified in the foregoing subdivision (a) shall be determined by ASTM Test Method D 2622 (67 or latest).

(c) For the purposes of this section, the term "unleaded gasoline" shall mean gasoline with a lead content no greater than 0.05 gram per gallon as determined by ASTM Test Method D 3237 73.

(d) Effective January 1, 1985, no person shall sell, produce for sale, offer for sale, or deliver for sale in the South Coast Air Basin or Ventura County any diesel fuel, except that specifically exempted by the Executive Officer pursuant to subdivision (h), for use in motor vehicles which has a sulfur content greater than 500 parts per million (0.05 percent) by weight.

(e) The sulfur content limitation specified in subsection (d) shall be determined by ASTM Test Method D 2622 (77), or equivalent.

(f) For the purposes of this section, the term "diesel fuel" shall mean any petroleum distillate as defined by ASTM Test Method D 975 (77), excluding No. 4-D.

(g) For the purposes of this section, the term "small refiner" shall mean any refiner who owns or operates a refinery (or refineries) located in the South Coast Air Basin and/or Ventura County with a total combined crude oil capacity of not more than 50,000 barrels per day and who does not own or operate refineries in the United States with a total combined crude oil capacity of more than 137,500 barrels per day.

(h) (1) The provisions of subsection (d) shall not apply to an amount of diesel fuel produced by a small refiner as defined in subsection (g) in the South Coast Air Basin and/or Ventura County equal to 120 percent of the highest annual diesel fuel production level in the South Coast Air Basin and/or Ventura County of the three calendar years immediately preceding the date of adoption of subsection (d). This exemption shall not apply to any fuel not produced in the South Coast Air Basin or Ventura County.

(2) To qualify for this exemption, a refiner shall submit to the Executive Officer of the Air Resources Board an Application for Exemption for each refinery which shall specify the quantity and ASTM grade of diesel fuel produced at each refinery in the South Coast Air Basin or Ventura County during each of the three calendar years immediately preceding the date of adoption of subsection (d) and data on crude oil capacity and ownership for the refineries which it owns and operates in the South Coast Air Basin and/or Ventura County and in the United States. Within 90 days

of receipt of the application, the Executive Officer of the Air Resources Board shall grant or deny the exemption, in writing. The exemption shall be granted if the Executive Officer determines that the applicant meets the provisions of this subsection and subsection (g) and shall be rescinded when such provisions are no longer met.

(3) In addition to the reporting requirements of subsection (i) below, beginning on January 1, 1985, each small refiner who is granted an exemption shall report on a quarterly basis to the Executive Officer of the Air Resources Board the quantity and ASTM grade of diesel fuel produced in the South Coast Air Basin and Ventura County during that calendar quarter. Such reports shall be provided within 45 days of the close of each quarter. Each such refiner shall also be required to report to the Executive Officer within 90 days of project completion, any refinery addition or modification which would affect the crude oil capacity for refineries owned and operated in the South Coast Air Basin, Ventura County and the United States.

(i) (1) Each refiner shall perform sampling and testing of the diesel fuel stored in all refinery tank(s) owned or operated in the South Coast Air Basin and Ventura County as set forth in this subsection. If a refiner blends diesel fuel components directly to pipelines, tankships, railway tankcars or trucks and trailers, the loading(s) shall be sampled and tested for sulfur content by the refiner or authorized contractor. All sampling and testing shall be performed a minimum of four times per month at least six days apart and the results shall be reported individually (and, for information purposes only, as a diesel fuel production weighted average sulfur content) to the Executive Officer of the Air Resources Board within

45 days of the close of each quarter. In the event a refiner in the South Coast Air Basin or Ventura County produces diesel fuel not specifically exempt from the provisions of subsection (d) with a sulfur content exceeding that allowed in subsection (d), such refiner shall maintain records acceptable to the Executive Officer of the Air Resources Board which show that the diesel fuel is being produced for transshipment out of the South Coast Air Basin or Ventura County or sold for non-vehicular use. Failure to provide such documentation upon request shall be deemed a violation of subsection (d).

(2) Each person importing diesel fuel for sale into the South Coast Air Basin or Ventura County by tankship, pipeline, railway tankcars, or trucks and trailers, shall sample and test such fuel. The results of such tests shall be reported on a quarterly basis to the Executive Officer of the Air Resources Board within 45 days of the close of each quarter.

(3) The Executive Officer of the Air Resources Board may perform any sampling and testing deemed necessary to determine compliance by any person with the requirements of subsection (d) and may require that special samples be drawn and tested at any time.

~~(d)(1)~~ (j)(1) Any person who cannot comply with the requirements set forth in subdivision (a) or (d) of this section because of unreasonable economic hardship, unavailability of equipment or lack of technological feasibility may apply to the Executive Officer of the Air Resources Board for a variance.

The application shall set forth:

- (A) The specific grounds upon which the variance is sought;
- (B) The proposed date(s) which compliance with the sulfur content limitations in subdivision (a) or (d) will be achieved; and

(C) A plan reasonably detailing the method by which compliance will be achieved.

(2) Upon receipt of an application for a variance, the Executive Officer shall hold a hearing to determine whether, and under what conditions and to what extent, a variance from the requirements established by subdivision (a) or (d) of this section is necessary and will be permitted. Notice of the time and place of the hearing shall be sent to the applicant by certified mail not less than 30 days prior to the hearing. Notice of the hearing shall also be published in at least one newspaper of general circulation and shall be sent to every person who requests such notice, not less than 30 days prior to the hearing.

(3) At least 30 days prior to the hearing, the application for the variance shall be made available to the public for inspection. Interested members of the public shall be allowed a reasonable opportunity to testify at the hearing and their testimony shall be considered.

(4) No variance shall be granted unless all of the following findings are made:

(A) That the applicant for the variance is, or will be, in violation of the requirements established by subdivision (a) or (d) of this regulation;

(B) That, due to unreasonable economic hardship, unavailability of equipment or lack of technological feasibility beyond the reasonable control of the applicant, requiring compliance would result in either (i) an arbitrary or unreasonable taking of property, or (ii) the practical closing and elimination of a lawful business; and

(C) That such taking or closing would be without a corresponding benefit in reducing air contaminants.

(5) Any variance order shall include the date(s) by which compliance with the sulfur content limitations in subdivision (a) or (d) will be achieved and any other condition(s) including, where appropriate, increments of progress, that the Executive Officer of the Air Resources Board, as a result of the testimony received at the hearing, finds necessary.

(6) If the Executive Officer determines that, due to conditions beyond the reasonable control of the applicant, the applicant needs an immediate variance from the requirements established by subdivision (a) or (d) of this section, the Executive Officer may hold a hearing without complying with the provisions of subdivision ~~(d)(2)~~ (j)(2) or subdivision ~~(d)(3)~~ (j)(3) above. No variance granted under the provisions of this paragraph may extend for a period of more than 45 days. The Executive Officer shall maintain a list of persons who in writing have informed the Executive Officer of their desire to be notified by telephone in advance of any hearing held pursuant to this subdivision, and shall provide advance telephone notice to any such person.

(7) Upon the application of any person, the Executive Officer of the Air Resources Board may review and for good cause modify or revoke a variance from the requirements of subdivision (a) or (d) after holding a hearing in accordance with the provisions of this subdivision.

Memorandum

To : Huey D. Johnson
Secretary
Resources Agency

Date : August 19, 1981

Subject: Filing of Notice of
Decision of the Air
Resources Board

From : Air Resources Board

Pursuant to Title 17, Section 60007(b), and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.


Sally Rump
Board Secretary

attachments
Resolution 81-47

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Office of the Secretary

AUG 19 1981

Resources Agency of California

State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Further Consider Amendment to Title 13, California Administrative Code, Chapter 3, Subchapter 5 to Add a Regulation Limiting the Sulfur Content of Diesel Fuel for Use in Motor Vehicles in California.

Agenda Item Nos: 81-6-2, 81-14-1

Public Hearing Dates: April 22 and 23, 1981 and July 29 and 30, 1981

Response Date: July 30, 1981

Issuing Authority: Air Resources Board

Comment: The regulation may result in increased fuel costs to public and private transit operators which will be passed on to consumers in the form of increased fares or will result in reduced public transportation service. A decrease in service may result in increases in vehicular-generated pollutant emissions due to a shift of ridership from buses to private automobiles.

Response: SCRTD indicated in its testimony that adopting a sulfur content of vehicular diesel fuel regulation would result in increased fuel costs to SCRTD requiring either an increase in bus fares or a reduction in public transportation service.

If SCRTD chooses to reduce its public transportation service in response to increased fuel costs, a negative environmental impact could result if riders choose to drive private automobiles instead of riding the bus. However, SCRTD can choose the more likely option of increasing fares rather than reducing service. Page 72 of the June 12, 1981 staff report indicates that if the increased cost were uniformly passed on to the riders, a commuter who boards the bus 500 times per year would incur a total cost increase of \$2.15 to \$3.20 per year. SCRTD agreed during the hearing that, based on the assumption that the increased fuel cost would be 6.2¢ per gallon, the staff's analysis was correct.

Additionally, page 73 of the staff report discusses the relationship between fare increases and ridership. Studies show that the relationship is inelastic; that is, ridership is not sensitive to increased fares. History has shown that recently SCRTD has, in fact, increased its base fare by 44%, while ridership increased 18.3% over the same period of time.

Therefore, since SCRTD has the option of increasing its fares to recover any increase in the price of diesel fuel without incurring a loss in ridership, the adoption of the regulation is not expected to result in a negative environmental impact due to a switch from buses to private automobiles.

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