State of California
AIR RESOURCES BOARD

Resolution 94-52

July 29, 1994

Agenda Item No.: 94-7-3

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (the Board or ARB) to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Health and Safety Code section 43013 authorizes the Board to adopt and implement motor vehicle fuel specifications for the control of air contaminants which the Board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of Division 26 of the Health and Safety Code;

WHEREAS, sections 43018(a) and (b) of the Health and Safety Code direct the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date, and direct the Board no later than January 1, 1992 to take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, by December 31, 2000, specified reductions in the emissions of air pollutants from vehicular sources, including emissions of oxides of nitrogen (NOx) and particulate matter (PM);

WHEREAS, section 43018(c) of the Health and Safety Code provides that in carrying out section 43018, the Board shall adopt standards and regulations which will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including but not limited to specification of vehicular fuel composition;

WHEREAS, sections 43013 and 43018 of the Health and Safety Code further provide that in adopting standards and regulations pertaining to motor vehicle fuels, the Board shall consider the effect of the standards and regulations on the economy of the state;

WHEREAS, following a public hearing on November 17, 1988, the Board approved and subsequently adopted statewide regulatory limits on the sulfur and aromatic hydrocarbon content of California motor vehicle diesel fuel, which are now contained in Title 13, California Code of Regulations, sections 2281 and 2282 respectively;

WHEREAS, section 2282 establishes a basic 10 percent limit on the aromatic hydrocarbon content of California motor vehicle diesel fuel sold or supplied

on or after October 1, 1993; refiners are permitted to sell diesel fuel formulations having aromatic hydrocarbon contents greater than 10 percent if the formulation has been certified through engine testing to result in emissions equivalent to the emissions resulting from diesel fuel having a 10 percent aromatic hydrocarbon content;

WHEREAS, section 2282 establishes a less stringent aromatic hydrocarbon standard of 20 percent (or equivalent) for California motor vehicle diesel fuel produced by small refiners, but limits the quantity of diesel fuel that a small refiner is permitted to produce each year subject to the 20 percent standard instead of the 10 percent standard; this quantity is referred to as the small refiner's "exempt volume" and is calculated as 65 percent of the average of the three highest annual production volumes of "distillate fuel" (No. 1, No. 2, No. 4 diesel fuel and No. 1 and No. 2 fuel oil) that each refinery produced during the base years 1983-1987, as reported to the California Energy Commission, except that for refineries that were not operating for two or more years during 1983-1987, exempt volume may be calculated as 65 percent of the average annual production volumes of distillate reported for 1989 and 1990;

WHEREAS, section 2282(a)(4) provides that the aromatic hydrocarbon content limits will not apply during the effective period of any suspension of the limits on the sulfur content of diesel fuel; three small refiners--Kern Oil and Refining (Kern), Paramount Petroleum (Paramount) and Powerine Oil Company (Powerine)--have received suspensions of the sulfur content limits effective through September 30, 1994, and accordingly diesel fuel produced by these refiners and supplied from their refineries prior to October 1, 1994 is not subject to the ARB's aromatic hydrocarbon standards;

WHEREAS, the staff has initially proposed amendments to section 2282 which would allow a small refiner the option each year of producing California motor vehicle diesel fuel subject to the 20 percent aromatic hydrocarbon content limit in volumes up to 100 percent of its "distillate fuel" production during the base years, providing that under the option the small refiner's total sales in the year of "distillate fuel" (including diesel fuel) for the California market could not exceed 100 percent of its "distillate fuel" production during the base years;

WHEREAS, the staff's originally proposed amendments would also delay the effective date of the small refiner exempt volume limits now in the regulation from October 1, 1994 to January 1, 1995, for small refiners not subject to the aromatic hydrocarbon limits until October 1, 1994 due to suspensions of the diesel fuel sulfur content limits; staff proposes that the diesel fuel produced by such a small refiner and supplied from its refinery during the fourth quarter of 1994, which will be subject to the less stringent 20 percent aromatic content standard, be limited to the quarterly volume limits imposed by the Executive Officer in connection with issuance of the suspension orders;

WHEREAS, at the public hearing to consider this matter the ARB staff has proposed modifications to the originally-proposed amendments, set forth in Attachment B hereto;

WHEREAS, the California Environmental Quality Act and Board regulations require that an action not be adopted as proposed where it will have significant adverse environmental impacts if feasible alternatives or mitigation measures are available which would substantially reduce or avoid such impacts;

WHEREAS, the Board has considered the impact of the proposed amendments on the economy of the state;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), Part 1, Division 3, Title 2 of the Government Code; and

WHEREAS, the Board finds that:

The presence of small refiners in the California motor vehicle fuels market has an important procompetitive impact, and small refiners are often critical suppliers for the independent, unbranded marketers who distribute a considerable percentage of California motor vehicle diesel fuel;

Since the Board acted in 1988 to approve the small refiner provisions of section 2282, most of the then-existing California small refiners have either ceased operations altogether or have ceased producing motor vehicle diesel fuel;

The cost to the remaining small refiners of producing 10 percent or equivalent aromatic hydrocarbon content diesel fuel would be far greater on a per-gallon basis than the cost to large refiners, and these small refiners would suffer substantial economic penalties if they were forced to sell their noncomplying diesel fuel to out-of-state markets;

The three remaining small refiners other than Witco would not be able to operate economically after October 1, 1994 under the small refiner provisions now in place which set the exempt volumes at 65 percent of distillate fuel volumes produced during the base years, in part because California motor vehicle diesel fuel has represented considerably more than 65 percent of the small refiners' distillate fuel sales and because Paramount's and Powerine's below-average refinery utilization levels in the base years were well below the industry average due to financial difficulties;

Furthermore, California average refinery utilization rates have increased substantially since the beginning of the base years, from an average of about 70 percent in 1983-1984 to an average of about 90 percent in 1991-1992, and are significantly higher than 90 percent at the present time; this increase is attributable in large part to the need of refiners to spread increased operating costs across a maximized production volume, and operation at substantially lower utilization rates under current conditions may not be economically viable;

Accordingly, it is necessary and appropriate to allow each small refiner to base its exempt volume on the crude throughput level of its refinery when operated at the 90 percent average industry-wide refinery utilization rate for 1991-1992 in California; in order to identify specific and reasonable diesel fuel production levels when the refinery is operated at such a utilization rate, it is appropriate to multiply the crude throughput by the average of the refinery's two highest annual ratios of distillate produced to crude oil distilled in 1988-1992, and to further adjust that volume to reflect the average percentage of the refiner's distillate fuel production that was sold as California motor vehicle diesel fuel;

Under the amendments approved herein, the costs of small refiners to produce diesel fuel meeting the 20 percent or equivalent aromatic hydrocarbon limit will still on average be greater on a per-gallon basis than the costs to large refiners of producing diesel fuel meeting the 10 percent or equivalent aromatic hydrocarbon content limit;

The amendments approved herein pertaining to the volume limitations on the 20 percent aromatic hydrocarbon content diesel fuel produced by small refiners and supplied in the fourth quarter of 1994 are necessary and appropriate to assure a more orderly transition to the lower volume limits during the January-February low demand period rather than during October when the fall harvesting season results in a period of relatively high demand;

WHEREAS, the Board further finds that:

The amendments approved herein will result in a significant adverse environmental impact in that the amendments will increase the amount of 20 percent aromatic hydrocarbon content diesel fuel that may lawfully be supplied by small refiners by approximately 24,700 barrels per day during the fourth quarter of 1994 and by approximately 12,800 barrels per day starting January 1, 1995 compared to the lower

volume limits that would be imposed under the existing regulation starting October 1, 1994; this could reduce the emission benefits that would otherwise occur under the existing regulation in the fourth quarter of 1994 by up to about 5.9 tons per day of NOx and 1.3 tons per day in PM10, and could reduce the emission benefits that would otherwise occur under the existing regulation starting January 1, 1994 by up to about 3 tons per day of NOx and 0.6 tons per day of PM10;

The ARB has investigated whether there are any feasible mitigation measures or alternatives that would lessen or eliminate the significant adverse emission impacts of the amendments approved herein, and has not identified any such mitigation measures or alternatives which would also allow the remaining small refiners to produce diesel fuel in an economically viable manner;

The need to avoid the severe economic hardship to the remaining small refiners that would likely occur in the absence of the action taken herein, and the need to help assure that small refiners remain a procompetitive force in the motor vehicle fuels markets, is an overriding consideration that outweighs the significant adverse environmental impacts that will result from this action;

Although the amendments approved herein will clearly result in reduced emission benefits in October 1994 and thereafter compared to the emission benefits that would occur without the amendments, it is noteworthy that the total emission benefits from the aromatic hydrocarbon content limits in section 2282 as amended in this rulemaking will be at least as great as the emission benefits that would have been expected when the original regulation was adopted in 1988.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the amendments to section 2282, Title 13, California Code of Regulations, as set forth in Attachment A hereto, with the modifications described in Attachment B hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to incorporate into the approved regulatory amendments the modifications described in Attachment B hereto with such other conforming modifications as may be appropriate, and either to adopt the modified amendments after making them available to the public for a supplemental written comment period of 15 days, with such additional modifications as may be appropriate in light of supplemental comments received, or to present the amendments to the Board for further consideration if he determines that this is warranted in light of supplemental written comments received.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to take whatever expedited action is necessary to assure that the amendments approved herein pertaining to the volume limits for 20 percent aromatic hydrocarbon content diesel fuel supplied in the fourth quarter of 1994 by small refiners previously subject to suspensions of the sulfur content limits become effective prior to October 1, 1994.

I hereby certify that the above is a true and correct copy of Resolution 94-52 as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary

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SEP 15 1994
RESOURCES AGENCY OF CALIFORNIA

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Proposed Amendments to the Small Refiner Volume Provisions in the Regulation Limiting the Aromatic Hydrocarbon Content of California Motor Vehicle Diesel Fuel

STAFF'S SUGGESTED MODIFICATIONS TO THE ORIGINAL PROPOSAL

July 29, 1994

1. **Modifications to provisions identifying an optional mechanism for determining the volume of a small refiner's diesel fuel production that is subject to the less stringent 20 percent limit on aromatic hydrocarbon content**

Delete the originally proposed provisions identifying the option under which a small refiner could elect to produce more than its "exempt volume" as California motor vehicle diesel fuel subject to the 20 percent aromatic hydrocarbon content standard. This includes deleting the originally proposed new provisions in section 2282(e)(1)(B) through 2282(e)(1)(C); deleting the proposed amendments in section 2282(e)(3); deleting the proposed new definitions in section 2282(b)(1), (b)(5), and (b)(6), and making other necessary conforming modifications.

Add new language that allows small refiners to elect each year to use an optional calculation of exempt volume, set forth in a revised definition of exempt volume (section 2282(b)(4) in the existing regulation). This optional calculation is made in accordance with the following steps.

First, the barrel per calendar day "operable crude oil capacity" of the small refiner's refinery for 1991 and 1992 is identified, based on data which are reported to the ARB from the California Energy Commission (CEC) and are derived from "Monthly Refining Reports" (EIA 810) submitted to the CEC no later than June 30, 1994. If the CEC is unable to derive such data from the "Monthly Refining Reports" for a particular small refiner, the Executive Officer shall determine the small refiner's operable crude oil capacity for 1991 and 1992 based on other publicly available and generally recognized sources.

Second, this crude oil capacity is multiplied by 0.9011, representing the overall refinery utilization rate (crude oil run divided by operable crude oil capacity) in the California refining industry for 1991 and 1992, as derived from reports of crude oil run and operable capacity in the "Quarterly Oil Reports" issued by the CEC.

Third, the resulting crude throughput volume is multiplied by the average of the refinery's two highest annual ratios of distillate produced to crude oil distilled in the period 1988 through 1992, based on distillate production data recorded by the CEC from MO-7 reporting forms submitted to the CEC no later than June 30, 1994 and from crude

oil run data derived by the CEC from "Monthly Refining Reports" submitted to the CEC no later than June 30, 1994.

Fourth, the resulting volume is multiplied by the average of the small refiners' two highest annual fractions of distillate production that have been sold as California motor vehicle diesel fuel during the period 1988 through 1992. These fractions shall be determined by the Executive Officer from sales data certified by authorized representatives of the small refiners and such other information from the small refiners deemed necessary by the Executive Officer.

2. **Identifying batches of diesel fuel as nonexempt**

The small refiner provisions in the diesel aromatics regulation currently provide that all of the California motor vehicle diesel fuel that is shipped from a small refinery starting January 1 of each year is counted against the small refiner's "exempt volume." To provide additional flexibility, the staff recommends that the Board add the following sentence after the first sentence in section 2282(e)(1). The language is derived from a similar sentence in the small refiner provisions of the regulation limiting the sulfur content of motor vehicle diesel fuel sold in the South Coast Air Basin before October 1, 1993 (section 2280(h)(1)):

> Diesel fuel which is designated by the small refiner as not exempt under this section (e), and which is reported to the executive officer or his/her designee pursuant to a protocol entered into between the small refiner and the executive officer or his/her designee, shall not be counted against the exempt volume and shall not be exempt under this section (e).

3. **Determination of exempt volume for independent refiners temporarily subject to the small refiner provisions**

Add language to section 2282(j) providing that, for any independent refiner qualifying for interim treatment as a small refiner, exempt volume shall be determined in accordance with the method set forth in section 2282(b)(4) prior to the addition of the optional methodology for calculating exempt volume adopted in this rulemaking.