State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Notice of Public Hearing to Consider Adoption of and Amendments to Regulations Regarding Reformulated Gasoline (Phase 2 Gasoline Specifications)

Agenda Item No.: 91-11-1

Public Hearing Date: November 22, 1991

Issuing Authority: Air Resources Board

Comment: Several comments were received identifying significant environmental issues pertaining to this item. These comments are summarized and responded to in the Final Statement of Reasons, which is incorporated by reference herein.

Resolution 91-54 is also incorporated herein and attached hereto. In the Resolution, the Board made various findings pertaining to potential environmental impacts of the proposed regulations. The Board found that there are no feasible mitigation measures or alternatives available to the Board which would further substantially reduce the potential adverse impacts of the proposed regulations while at the same time providing the substantial overall public health benefit from the emissions reductions, as predicated in the Resolution.

Response: See above.

Certified: Pat Hutchens
Pat Hutchens
Board Secretary

Date: 9/30/92

State of California
AIR RESOURCES BOARD

Resolution 91-54

November 22, 1991

Agenda Item No: 91-11-1

WHEREAS, Health and Safety Code sections 39600 and 39601 authorize the Air Resources Board (the Board) 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 43018(a), enacted by the California Clean Air Act of 1988, directs 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;

WHEREAS, Health and Safety Code section 43018(b) directs 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, a reduction of reactive organic gases ("ROG") of at least 55 percent and at least a 15 percent reduction in the emissions of oxides of nitrogen ("NOx") from motor vehicles, and the maximum feasible reductions in particulates ("PM"), carbon monoxide ("CO"), and toxic air contaminants from vehicular sources;

WHEREAS, Health and Safety Code section 43018(c) 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, Health and Safety Code section 43013 authorizes the Board to adopt and implement motor vehicle fuel specifications for the control of air contaminants and sources of air pollution 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, Health and Safety Code section 43830 directs the Board to establish, by regulation, maximum standards for the volatility of gasoline at or below nine pounds per square inch (psi) or less Reid vapor pressure ("RVP") as determined by the American Society of Testing and Materials ("ASTM") Test D 323-58 or by an appropriate test determined by the Board, giving full consideration to topography and climatic conditions;

WHEREAS, Health and Safety Code section 39663 directs the Board to consider a plan for reducing public exposure to known and suspected toxic air

contaminants; and section 39667 directs the Board, based on its determinations pursuant to section 39663, to consider adoption of regulations to achieve the maximum possible reduction in public exposure to toxic air contaminants, which regulations may include, but are not limited to, the modification, removal, or substitution of vehicle fuel, vehicle fuel components, or fuel additives;

WHEREAS, the Motor Vehicle Toxics Control Plan, prepared pursuant to Health and Safety Code section 39663 and approved by the Board June 21, 1990, identifies the reduction of benzene in gasoline and the reduction of aromatic hydrocarbons in gasoline as two of the major elements in the Plan;

WHEREAS, section 211(m) of the federal Clean Air Act as amended in 1990 requires states containing specified CO nonattainment areas to submit revisions to their State Implementation Plans ("SIPs") requiring that gasoline sold for use in the areas contain not less than 2.7 percent oxygen by weight starting in the fall of 1992 during the high CO winter period specified by the Administrator of the U.S. Environmental Protection Agency ("EPA"); eight areas in California are among those for which such SIP revisions must be submitted;

WHEREAS, section 211(m)(3)(A) of the federal Clean Air Act directs the EPA Administrator to waive, in whole or part, the SIP revision requirements pertaining to the minimum oxygen content of gasoline upon a demonstration by a State to the Administrator's satisfaction that the use of oxygenated gasoline would prevent or interfere with the attainment by the areas of a national primary ambient air quality standard, or a state ambient air quality standard, for any pollutant other than CO;

WHEREAS, on September 28, 1990, by Resolution 90-59, the Board approved its Phase 1 reformulated gasoline regulations which, starting January 1, 1992, will limit the RVP of motor vehicle gasoline sold during the RVP season to 7.8 psi, require the use of effective deposit control additives in motor vehicle gasoline, prohibit the sale of gasoline to which lead has been purposefully added, or which has a lead content exceeding 0.05 g/gal, for use in any motor vehicles except farm equipment and special construction equipment, and generally prohibit (starting January 1, 1994) the sale of motor vehicle gasoline not represented as unleaded;

WHEREAS, in Resolution 90-59 the Board also endorsed the program for the development of Phase 2 reformulated gasoline regulations which would define the "cleanest" possible gasoline to achieve maximum reductions in ozone-forming potential and emissions of criteria and toxic air contaminants at the lowest cost to the consumer, and the Board directed the Executive Officer to continue developing a comprehensive regulatory proposal for Phase 2 reformulated gasoline with appropriate public input, and to schedule a public hearing in the latter part of 1991 for the Board to consider the adoption of the regulations with a 1995-1996 implementation date;

WHEREAS, the staff has initially proposed the adoption and amendment of regulations which would establish requirements for Phase 2 reformulated

gasoline starting January 1, 1996; these requirements would include the following elements:

Stringent standards for eight gasoline characteristics--RVP, two distillation temperatures, and sulfur, benzene, olefin, aromatic hydrocarbon and oxygen content;

Establishment of an absolute limit or cap for each specification, applicable throughout the gasoline distribution system;

Establishment of additional, more stringent standards applicable to gasoline when it is initially supplied from the producer or importer for all specifications but RVP, and provisions authorizing compliance through a form of averaging in the case of sulfur, aromatic hydrocarbon, and benzene content; and

Authorization for compliance through the sale of an alternative gasoline formulation certified based on vehicle emission testing to result in exhaust emissions equivalent to that achieved by gasoline meeting all of the flat limits applicable to producers;

WHEREAS, the staff has also initially proposed the adoption of a regulation that would establish requirements pertaining to the minimum and maximum oxygen content of gasoline starting in September 1992; these requirements would include the following elements:

Gasoline would be required to have an oxygen content of not less than 1.8 percent and not more than 2.2 percent by weight from November 1 through February 29 in the South Coast, San Diego, South Central Coast and Southeast Desert Air Basins, and from November 1 through January 31 in all other air basins; and

Gasoline would be required to have an oxygen content of not more than 2.2 percent, with no required minimum, in September and October in the South Coast Air Basin and Ventura County, and in October in all other air basins except the San Diego, South Central Coast (except Ventura County) and the Southeast Desert Air Basins;

WHEREAS, the regulatory proposal would be effected by amendments to Title 13, California Code of Regulations, sections 2250, 2251.5, and 2252, and the adoption of Title 13, California Code of Regulations, sections 2260 through 2271 and the incorporated "California Test Procedures for Evaluating Alternative Specifications for Gasoline," as set forth in Attachments A and B, and further by the adoption of a proposed 1992-1995 wintertime oxygenated gasoline regulation in new section 2258 of Title 13, California Code of Regulations;

WHEREAS, the portions of the proposed regulations which for certain wintertime control periods impose a minimum oxygen content of less than 2.7 percent will require a waiver of the federal Clean Air Act requirements pursuant to section 211(m)(3)(A) of that Act;

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 and alternatives or feasible mitigation measures to the proposed action are available which would substantially reduce or avoid such impacts;

WHEREAS, the Board has considered the impact of the proposed regulations 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;

WHEREAS, the Board finds that:

The state and federal health-based ambient air quality standards for ozone, CO, and PM10 are regularly and significantly exceeded in many areas of California, and the state and federal nitrogen dioxide (NO2) standards are exceeded in the South Coast Air Basin, and the state standards for sulfates are exceeded in the South Coast Air Basin;

On-road gasoline-fueled motor vehicles account for about one-third of the total statewide emissions of volatile organic compounds ("VOCs") and NOx, the primary precursors to ozone formation, and they account for about 70 percent of the CO emissions and about one-third of the PM10 precursor emissions;

Many areas of the state are experiencing substantial population growth, and the vehicle miles traveled in these areas have risen dramatically and are expected to continue to rise;

In several areas of the state it is likely that the state ozone and PM10 standards will not be achieved until some time after the year 2000;

The emission reductions resulting from the Phase 2 reformulated gasoline regulations approved herein are a necessary component in the attainment of the state ozone, PM10, CO, NO2, and sulfate standards in the nonattainment areas of the state, and in the maintenance of the standards in the remainder of the state;

All feasible measures must be included in the attainment plan of any air pollution control district which does not provide for districtwide emissions reductions of at least 5 percent a year for each nonattainment pollutant or its precursors; a preliminary review of district plans indicates

that many do not provide for such 5 percent per year emissions reductions; the measures in the district plans include control measures administered by the ARB as well as the districts;

A wide variety of toxic air contaminants and potentially toxic air contaminants are emitted by motor vehicles; the pollutants posing the majority of the potential toxic risk are benzene and 1,3-butadiene, and to a lesser extent formaldehyde, acetaldehyde, and diesel particulate;

The Phase 2 reformulated gasoline regulations approved herein, coupled with the Phase 1 regulations adopted following the Board's September 28, 1990 hearing, appropriately establish a comprehensive set of gasoline specifications designed to achieve the maximum reductions in criteria and toxic pollutants from gasoline-fueled vehicles, in due consideration of the economic impacts of the requirements and providing flexibility to gasoline producers and importers to help reduce their costs of compliance;

The Phase 2 reformulated gasoline regulations approved herein will reduce emissions of ozone precursors (VOCs plus NOx) in California ozone nonattainment areas by approximately 180 tons per day in 1996, 150 tons per day in 2000, 110 tons per day in 2005 and 65 tons per day in 2010;

The Phase 2 reformulated gasoline regulations approved herein will reduce emissions of CO in California CO nonattainment areas by approximately 1200 tons per day in 1996, 850 tons per day in 2000, 500 tons per day in 2005 and 200 tons per day in 2010;

The Phase 2 reformulated gasoline regulations approved herein are expected to result in substantial reductions in emissions of toxic air contaminants, with an expected annual reduction of about 40 potential cases of cancer per year over the period 1996 to 2010;

The regulations approved herein are necessary and appropriate to attain and maintain the state and national ambient air quality standards identified above and to reduce exposures to toxic air contaminants;

The regulations approved herein are technologically feasible within the applicable timeframes;

The Phase 2 reformulated gasoline regulations approved herein contain provisions pertaining to compliance through averaging, compliance through the certification of gasoline formulations resulting in equivalent emission reductions

based on motor vehicle emission testing and variances; these provisions provide flexibility in meeting the regulatory requirements at a potentially lower cost, and provide for relief in situations of extraordinary hardship;

The modifications described in Attachment C and D pertaining to Phase 2 reformulated gasoline are necessary and appropriate to provide additional flexibility in meeting the requirements and to clarify the intent of the provisions; the modifications pertaining to small refiners are appropriate in light of their greater difficulty in raising capital to construct the necessary equipment and greater uncertainties regarding the recovery of capital expenditures;

The overall average cost-effectiveness of the Phase 2 regulations approved herein in reducing the emissions of criteria pollutants during the period from 1996 through 2005, assigning one-half of the program costs to reductions of criteria air pollutants and one-half to reductions of toxic air contaminants, is expected to range from $7,000 per ton to $11,000 per ton; these cost-effectiveness values are within the range of other measures that are expected to be implemented during the same time period in order to attain and maintain the state ambient air quality standards;

The overall average cost-effectiveness of the regulations approved herein in reducing emissions of toxic pollutants in the period from 1996 through 2005, assigning one-half of the program costs to reductions of criteria air pollutants and one-half to reductions of toxic air contaminants, is expected to range from $19 million to $26 million per potential cancer case avoided;

The Phase 2 reformulated gasoline regulations approved herein are expected to result in an increase of the cost of gasoline between 12 cents and 17 cents per gallon, and to result in capital investments from $3 billion to $6 billion; the economic impacts of the regulations are warranted in light of the public health benefits associated with the regulations; and

WHEREAS, the Board further finds that:

The regulations approved herein will result in significant reductions in emissions from motor vehicles of the ozone precursors VOC and NOx, CO, sulfur dioxide, and toxic air contaminants including benzene and 1,3-butadiene;
The regulations approved herein may result in adverse environmental impacts due to increases in refinery emissions and emissions related to increased use of transportation

systems; the permit requirements of the air pollution control districts are expected substantially to mitigate impacts from increased refinery emissions;

Construction of refinery equipment needed for compliance with the regulations approved herein could result in temporary emissions from heavy-duty equipment and disruption of the soil, including the generation of dust;

The regulations approved herein are expected to result in increased shipments of MTBE and ethanol, with concomitant impacts on waterborne and rail traffic; and

There are no feasible mitigation measures or alternatives available to the Board which would further substantially reduce the potential adverse impacts of the proposed regulations while at the same time providing the substantial overall public health benefit from the reductions noted herein.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the amendments to Title 13, California Code of Regulations, sections 2250, 2251.5, and 2252, and the adoption of Title 13, California Code of Regulations, sections 2260 through 2272 and the incorporated "California Test Procedures for Evaluating Alternative Specifications for Gasoline," as set forth in Attachments A and B, with the modifications pertaining to Phase 2 reformulated gasoline described in Attachment C hereto, and with the further modifications described in Attachment D hereto.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer: (1) to incorporate into the approved regulations and incorporated documents the modifications described in Attachments C and D hereto, the other modifications approved herein, and such other conforming modifications as may be appropriate; (2) to conduct an informal workshop on the modified language if warranted; and (3) either to adopt the modified regulations, amendments, and new documents 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 regulations, amendments, and documents 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 apply to the U.S. EPA for a waiver under federal Clean Air Act section 211(m)(3)(A) to the extent necessary to permit the oxygenate regulations approved herein to satisfy the requirements of that Act.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to continue work on the development of a predictive model that could be used to certify a set of alternative gasoline specifications that could be met to satisfy compliance with the Phase 2 reformulated gasoline requirements, and

to schedule a rulemaking hearing in the spring of 1992 for the Board to consider adoption of the model.

BE IT FURTHER RESOLVED, that the Board directs the Executive Officer to work with industry and other interested parties to develop improvements to the test methods approved herein with the objective of enhancing precision and practicality of use, and to propose regulatory amendments to implement such improvements as appropriate.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to investigate further the status of independent refiners, and to return to the Board with a recommendation on the appropriateness of considering delaying the compliance requirements for independent refiners in a subsequent rulemaking.

BE IT FURTHER RESOLVED, that the Board continues consideration of the proposed wintertime oxygenated gasoline regulation for the period before 1996 to a further hearing on December 12, 1991.

I hereby certify that the above is a true and correct copy of Resolution 91-54, as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary

Resolution 91-54

November 22, 1991

Identification of Attachments to the Resolution

Attachment A: Proposed amendments to Title 13, California Code of Regulations, sections 2250, 2251.5, and 2252, and proposed new Title 13, California Code of Regulations, sections 2260 through 2271, as set forth in Appendix A of Volume 1 of the Staff Report, "Proposed Regulations for California Phase 2 Reformulated Gasoline."

Attachment B: Proposed "California Test Procedures for Evaluating Alternative Specifications for Gasoline," to be incorporated by reference in new Title 13, California Code of Regulations, section 2266, as set forth in Appendix B of Volume 1 of the Staff Report, "Proposed Regulations for California Phase 2 Reformulated Gasoline."

Attachment C: Staff's Suggested Changes to the Proposed Phase 2 Reformulated Gasoline and Wintertime Oxygenate Regulations (Distributed at the hearing on November 21, 1991).

Attachment D: Additional Modifications Approved by the Board.

ATTACHMENT C

PUBLIC HEARING ON PROPOSED REGULATIONS REGARDING PHASE 2 REFORMULATED GASOLINE AND THE WINTERTIME OXYGENATES PROGRAM

NOVEMBER 21 AND 22, 1991

Staff's Suggested Changes to the Original Regulatory Proposal

I. **Phase 2 Reformulated Gasoline Regulations**

1. Identification of flat limits, standards to be met on average, and caps.

For the **aromatic hydrocarbon** content specifications, change the "designated alternative limit" standard for averaging from 20 percent to 25 percent by volume. Change the flat limit from 25 percent to 28 percent by volume. The cap remains at 30 percent by volume.

Sections Affected: Section 2262.7(a), (b), and (c).

For the **olefin** content specifications, add a "designated alternative limit" standard of 5.0 percent by volume. Change the flat limit from 5.0 percent to 7.0 percent by volume. The cap remains at 10.0 percent by volume. "Designated alternative limit" averaging would be treated identically to the way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2262.4(b), new (c); Section 2264.

For the **T90** specifications, add a "designated alternative limit" standard of 300 degrees F, with a restriction that no designated alternative limit could exceed 315 degrees F. Change the flat limit from 300 degrees F. to 310 degrees F. The cap remains at 330 degrees F. "Designated alternative limit" averaging would be treated identically to the way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2262.6(b), new (c); Section 2264.

For the **T50** specifications, add a "designated alternative limit" standard of 200 degrees F. Keep the flat limit at 210 degrees F. The cap remains at 220 degrees F. "Designated alternative limit" averaging would be treated identically to the

way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2252.6 (b), new (c); Section 2264.

2. Treatment of Small Refiners.

Small refiners would be provided with a two-year extension for meeting the gasoline specifications for sulfur content, olefins, T90 and T50 until January 1, 1998, subject to the following conditions.

Small refiners would be defined as they are in the regulation on diesel fuel aromatic hydrocarbon content (former 13 Cal. Code Regs. section 2256(b)(19), current section 2282(b)(19)), except that the maximum refinery crude oil capacity would be 55,000 bpsd instead of 50,000 bpsd:

> "Small refiner" means any refiner who owns or operates a refinery in California that:
> (A) Has and at all times had since January 1, 1978, a crude oil capacity of not more than 55,000 barrels per stream day;
> (B) Has not been at any time since September 1, 1988, owned or controlled by any refiner that at the same time owned or controlled refineries in California with a total combined crude oil capacity of more than 55,000 barrels per stream day; and
> (C) Has not been at any time since September 1, 1988, owned or controlled by any refiner that at the same time owned or controlled refineries in the United States with a total combined crude oil capacity of more than 137,500 barrels per stream day.

During the extension, only an amount of the small refiner's annual gasoline production (excluding the volume from oxygenates) up to its "exempt volume" would be exempt from the identified specifications. The small refiner's "exempt volume" would be equivalent to the average of the three highest annual production volumes of motor vehicle gasoline reported for the small refiner's California refinery(ies) in the period 1987 to 1990, inclusive, to the California Energy Commission as required by the Petroleum Industry Information Reporting Act of 1980 (Public Resources Code Sections 25350 et seq.). This is also similar to the treatment in the diesel aromatic hydrocarbon regulation.

The small refiner's extension would apply only if the small refiner has demonstrated to the Executive Officer's satisfaction that it is making good faith efforts to construct additional refinery equipment, either at the small refiner's refinery or in a cooperative agreement with one or more other small refiners, in accordance with a schedule which is reasonably likely to enable the

small refiner to comply with the phase 2 reformulated gasoline specifications through refinery processing by January 1, 1998. Additional provisions similar to those in the diesel fuel sulfur content regulation (former section 2255(g), renumbered section 2281(g)) would be included.

Sections Affected: New section 2272.

3. Test Procedures for Evaluating Alternative Specifications for Gasoline.

(a) Change Deltas (tolerance level for the upper bound) from 1 percent for all pollutants to the following:

NOx	2 percent
Mass NMOG	3 percent
g. Ozone/Mi	4 percent
Potency-Weighted Toxics	4 percent
CO	4 percent

Sections Affected: "Test Procedures for Evaluating Alternative Specifications for Gasoline," sections IV., IX.A.

(b) Change relative potencies of toxic air contaminants to reflect revised draft potencies developed by OEHHA:

	Relative Potency	
	Original	Revised
1,3-butadiene	1.0	1.0
benzene	0.21	0.18
formaldehyde	0.17	0.15
acetaldehyde	0.016	0.014

Sections Affected: "Test Procedures for Evaluating Alternative Specifications for Gasoline," section IX.B.3.

(c) Change maximum allowable T90 from 300 degrees F to 330 degrees F. Change maximum allowable T50 from 210 degrees F to 220 degrees F.

Sections Affected: "Test Procedures for Evaluating Alternative Specifications for Gasoline," section I.A.3.

(d) Change the reference fuel specifications to reflect the revisions to the flat limits for aromatic hydrocarbons, olefins, T90 and T50.

Sections Affected: "Test Procedures for Evaluating Alternative Specifications for Gasoline," section I.C.2.

4. Benzene averaging; generation and use of credits.

Delete special provisions for generation and use of benzene credits; instead provide for averaging of benzene to be done in the same way as averaging for sulfur and aromatic hydrocarbons in section 2264(c) and (d).

Sections Affected: Section 2264(e).

5. Sampling Procedures.

Revise the sampling methodology in section 2296 so that it applies more generally to motor vehicle fuel sampling. Various provisions would be clarified and simplified, but there would be no substantive changes. A cooling bath would only be required where compliance with the RVP, T90 and T50 standards is being determined.

Sections Affected: Section 2263(a); 2296

6. Test Methods.

Change reference to olefin content test method from ASTM D 1319-88 to D 1319-89. Change reference to oxygen content test method from ASTM D 4815-88 to D 4815-89. Change reference to T90 and T50 test method from ASTM D 86-82 to D 86-90.

Modify provisions on determining oxygen content in the same manner as the modifications to the wintertime oxygenate regulations described in section II.4. below.

In the referenced test method ARB MLD 116 (set forth in Appendix 6 of the TSD):

(a) Add 10 PID lamp energy of 10.0 eV. (Sec. 5.2)

(b) Clarify that the correction factor for the PID is the ratio of the concentrations of o-xylene as determined from the FID and PID sequels. (Sec. 6.2.2)

(c) Change the dilution ratio for isooctane and clarify that both the gasoline sample and standard are to be diluted in the same ratio (Section 5.1) as

follows: "Each gasoline sample and standard is diluted 1:30 with isooctane in an autosampler vial."

Sections Affected: Section 2263(b)

7. Miscellaneous

(a) Correct a drafting error in section 2261(b) by deleting the reference to section 2258 (Oxygen Content of Gasoline in the Wintertime).

II. Wintertime Oxygenates Program

1. Standards for September and October.

(a) Change the regulatory control period for the South Coast Air Basin and Ventura County so that it starts October 1 rather than September 1. This change is premised on a conclusion that these areas are not prone to high ambient concentrations of CO in September; we hope that EPA will determine in its final rulemaking on control periods that the Los Angeles-Anaheim-Riverside CMSA is not prone to high ambient concentrations of carbon monoxide in September. As modified, the regulation would impose no requirements in September.

(b) Eliminate the special standard for October, so that the 1.8 percent - 2.2 percent by weight oxygen content standard applicable in November through February would also apply in October (starting October 1993).

(c) In order to assure the availability of adequate supplies of oxygenates during the wintertime oxygenate program, revise the RVP regulation to provide a one psi allowance to blends of gasoline containing at least 5 percent ethanol, in October only.

Section Affected: Section 2258(a)(1) and (a)(2); Section 2251.5(a)(3).

2. Compliance at service stations during first 15 days of control period.

Add a new subsection providing that the minimum and maximum oxygen content limits do not apply to a transaction occurring during the first 15 days of the October regulatory control period where the transaction involves the transfer of gasoline from a stationary storage tank to a motor vehicle fuel tank and the person selling, supplying, or offering the gasoline demonstrates as an affirmative defense that he or she has made, prior to the transaction, specific arrangements with a gasoline distributor for the delivery of an oxygenated or nonoxygenated gasoline blend

in quantities that will result in gasoline in the stationary storage tanks at the facility having an oxygen content of from 1.8 percent to 2.2 percent by weight by October 16. In addition, provide that a distributor of gasoline to service stations or bulk purchaser-consumers is not subject to the minimum oxygenate content limit during the 15 day period if the distributor demonstrates that the gasoline is being distributed pursuant to a prior arrangement to deliver unoxygenated gasoline to bring the facility into compliance with the 1.8 percent - 2.2 percent oxygen content limits by October 16.

Section Affected: New section 2258(a)(5).

3. Variances.

EPA's original July 9, 1991 Notice of Proposed Rulemaking on Guidelines for an Oxygenated Gasoline Credit Program made no reference to relief from liability in extraordinary circumstances. As a result of the Negotiated Rulemaking process, in its September 6, 1991 draft modifications to the notice of proposed rulemaking EPA suggests that states should consider a provision for relief from liability in very limited circumstances. (pp. 65-66). In its September 23, 1991 draft supplemental proposal on reformulated gasoline enforcement regulations, EPA has provided draft regulatory language which would implement this concept. (pp. 64-65 of Draft; proposed 40 CFR sec. 80.73). EPA has indicated that such an approach represents the maximum extent to which a relief from liability provision could be approved in a wintertime oxygenated gasoline SIP revision. Accordingly, we recommend deletion of the variance language in the original proposal and substitution of the following language that is closely patterned after EPA's proposed regulation in the September 23 reformulated gasoline draft. We recommend that the Executive Officer be authorized to expand the text as appropriate prior to the 15-day availability period to further clarify the applicable procedures.

> Section 2258(d) **Inability to produce conforming gasoline in extraordinary circumstances.**
>
> In appropriate extreme and unusual circumstances (e.g., natural disaster or Act of God) which are clearly outside the control of the refiner, importer, or oxygenate blender and which could not have been avoided by the exercise of prudence, diligence, and due care, the executive officer may permit a refiner, importer, or oxygenate blender, for a brief period, to distribute gasoline which does not meet the requirements in section 2258(a) if:
>
> (a) It is in the public interest to do so (e.g., distribution of the nonconforming gasoline is

necessary to meet projected shortfalls which cannot otherwise be compensated for);

(b) The refiner, importer, or oxygenate blender exercised prudent planning and was not able to avoid the violation and has taken all reasonable steps to minimize the extent of the nonconformity;

(c) The refiner, importer, or oxygenate blender can show how the requirements for oxygenated gasoline will be expeditiously achieved;

(d) The refiner, importer, or oxygenate blender agrees to make up air quality detriment associated with the nonconforming gasoline, where practical; and

(e) The refiner, importer, or oxygenate blender pays to the Air Pollution Control Fund an amount equal to the economic benefit of the nonconformity minus the amount expended, pursuant to paragraph (d) of this section, in making up the air quality detriment.

Section Affected: Section 2258(d).

4. Sampling Procedures.

Add references to sampling procedures identical to those described above for the reformulated gasoline regulations.

Section Affected: Section 2258(c)

5. Test Methods.

Clarify that ASTM D 4815-88 is used to determine the mass concentration of each oxygenate in the gasoline sampled. Provide that the oxygen content of the gasoline is determined by multiplying the mass concentration of each oxygenate in the gasoline sampled by the oxygen molecular weight contribution of the oxygenate set forth in the table below. Provide that all volume measurements shall be adjusted to 60 degrees Fahrenheit. If deemed appropriate by the Executive Officer, identify the assumed density of the gasoline. This approach is based on EPA's proposed approach

Attachment D

PUBLIC HEARING ON PROPOSED REGULATIONS REGARDING PHASE 2 REFORMULATED GASOLINE AND THE WINTERTIME OXYGENATES PROGRAM

NOVEMBER 21 AND 22, 1991

Additional Modifications Approved by the Board

The Board approved the proposed regulations regarding Phase 2 reformulated gasoline with various modifications to the original proposal. Most of the modifications are set forth in the "Staff's Suggested Changes to the Original Regulatory Proposal," distributed at the hearing on November 21, 1991 and appended as Attachment C to Resolution 91-54. In addition, the Board approved the further modifications identified below. In the case of Item 1, "Identification of flat limits, standards to be met on average, and caps," the modifications set forth below replace the modifications in the Staff's Suggested Changes.

1. Identification of flat limits, standards to be met on average, and caps.

For the **aromatic hydrocarbon** content specifications, change the "designated alternative limit" standard for averaging from 20 percent to 22 percent by volume. The flat limit remains as originally proposed at 25 percent by volume, and the cap remains at 30 percent by volume.

Sections Affected: Section 2262.7(a), (b), and (c).

For the **olefin** content specifications, add a "designated alternative limit" standard of 4.0 percent by volume. Change the flat limit from 5.0 percent to 6.0 percent by volume. The cap remains at 10.0 percent by volume. "Designated alternative limit" averaging would be treated identically to the way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2262.4(b), new (c) and (d); Section 2264.

For the **T90** specifications, add a "designated alternative limit" standard of 290 degrees F, with a restriction that no designated alternative limit could exceed 310 degrees F. The flat limit remains as originally proposed at 300 degrees F, and the cap remains at 330 degrees F. "Designated alternative limit" averaging would be treated identically to the way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2262.6; Section 2264.

For the T50 specifications, add a "designated alternative limit" standard of 200 degrees F. Keep the flat limit at 210 degrees F. The cap remains at 220 degrees F. "Designated alternative limit" averaging would be treated identically to the way it is treated for aromatic hydrocarbon content and sulfur content.

Sections Affected: Section 2262.6; Section 2264.

2. Start date.

Instead of the originally proposed start date of January 1, 1996, compliance with the flat limits and designated alternative limits will be required starting March 1, 1996, and compliance with the caps will be required starting April 1, 1996.

Sections Affected: Sections 2250, 2251.5, 2252, and 2261.

3. Treatment of small refiners.

Include the modifications pertaining to small refiners as described in the Staff's Suggested Changes," provided that (a) the two-year extension described therein would apply until March 1, 1998 in the case of flat limits and designated alternative limits, and until April 1, 1998 in the case of caps, and (b) if deemed appropriate by the Executive Officer, the "exempt volume" shall be based on data contained in excise tax returns rather than in reports filed with the California Energy Commission.

Sections Affected: Sections 2260 and 2272.