Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
1001 I Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Gray Davis
Governor

August 21, 2001

Dear Sir or Madam:

Enclosed for your review and comment are proposed modifications to the Air Resources Board (ARB) "Interim Procedure for Verification of Emission Reductions from Alternative Diesel Fuels."

On November 3, 2000, ARB staff developed an interim procedure to verify emission reductions of Oxides of Nitrogen (NOx) and Particulate Matter (PM) from alternative diesel fuels. Alternative diesel fuels are fuels used in diesel engines that are not reformulated diesel fuels as defined in section 2281 and 2282 of Title 13, of the California Code of Regulations and do not require engine or fuel system modifications to operate on such fuels. The interim procedure allows applicants to obtain ARB verification of the incremental emission benefits for NOx and PM when compared to a 10 percent aromatic reference fuel.

The proposed modifications pertain to changes in the reference fuel specifications. The proposed modifications are contained in enclosure 1.

We welcome any comments or questions you may have on these proposed modifications. Written comments should be submitted by September 20, 2001.

Mr. Bob Okamoto, APS
Air Resources Board
Stationary Source Division
PO Box 2815
Sacramento, California 95812

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 Website: http://www.arb.ca.gov.

California Environmental Protection Agency

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Should you have any question regarding the proposed modifications or the verification procedure in general, please contact Mr. Bob Okamoto, Air Pollution Specialist, at (916) 327-2953 or Mr. Gary M. Yee, Manager, Industrial Section at (916) 327-5986.

Sincerely,

Dean C. Simeroth, Chief
Criteria Pollutants Branch

Enclosure

cc: Mr. Gary Yee, Manager
Industrial Section

Mr. Bob Okamoto, APS
Industrial Section

Enclosure 1

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Proposed Modifications to Interim Procedure for Verification of Emission Reductions for Alternative Diesel Fuels

(5) Reference Fuel Specifications.

The reference fuel used in the comparative testing described in section (6) shall be ~~produced from straight-run California diesel fuel by a hydrodearomatization process and shall have the characteristics set forth below under "Reference Fuel Specifications" (the listed ASTM methods are incorporated herein by reference):~~ *one of the following.*

(1) A California produced 10% aromatic reference fuel. The reference fuel shall be produced from straight-run California diesel fuel by a hydrodearomatization process and shall have the characteristics set forth below under "Reference Fuel Specifications" (the listed ASTM methods are incorporated herein by reference):

(2) A reference diesel fuel "like" a California diesel reference fuel made from a straight-run California diesel fuel by a hydrodearomatization process and having the characteristics set forth below under "Reference Fuel Specifications". In addition the reference fuel shall exhibit the bell shaped distillation curve (temperature versus amount distillate collected per temperature interval) characteristic of diesel fuel and no chemical feedstocks or pure chemicals such as solvents shall be used as blend stocks. Details of the source and specifications of the feedstocks must be provided in the protocol and the processes and diesel feedstocks used to make the reference fuel must be reviewed and approved by the ARB.

(3) For alternative diesel fuels that contain diesel as a base fuel (e.g. emulsified diesel fuel and 80:20 biodiesel fuel), the base diesel fuel used to make the alternative diesel fuel must be used as the reference fuel. The base diesel fuel can be a reference fuel as described in (1) and (2) or a certified, commercially available diesel fuel sold in California. The base diesel reference fuel shall meet the API, viscosity, flash point, and distillation as set forth below in "Reference Fuel Specifications": The sulfur content, aromatic hydrocarbon content, polycyclic aromatic hydrocarbon content, nitrogen content, natural cetane number, API gravity, viscosity, and distillation specifications must be provided for the base diesel reference fuel.

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Reference Fuel Specifications

Property	General Reference Fuel Specifications	ASTM Test Method
Sulfur Content	500 ppm max	D5453-93
Aromatic Hydrocarbon content, Vol. %	10% max	D5186-96
Polycyclic Aromatic Hydrocarbon content %	1.4% max	D5186-96
Nitrogen Content	10 ppm max	D4629-96
Natural Cetane Number	48 min	D613-84
Gravity, API	33-39	D287-82
Viscosity at 40°, cSt	2.0-4.1	D445-83
Flash point, °F	130	D93-80
Distillation, °F IBP 10%REC 50%REC 90%REC EP	 340-420 400-490 470-560 550-610 580-660	D86-96