

September 16, 2013

Alexander (Lex) Mitchell
Alternative Fuels Branch, SSD
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95814
Via email to: amitchel@arb.ca.gov

Dear Lex:

Thank you for the opportunity to review and comment on the pre-publication version of the Proposed Regulation Order which was discussed during the September 5, 2013, Workshop regarding Proposed Alternative Diesel Fuel (ADF) Regulation (“Proposed Regulation”).

The Truck and Engine Manufacturers Association (EMA) represents on-highway, nonroad, marine, and locomotive engine manufacturers whose customers use the fuel to be regulated by the Proposed Regulation. As stated previously, EMA has no significant concerns with ARB’s proposed regulatory scheme, but it does recommend several specific changes to the proposed regulatory language. It also is important that ARB consider the consequences of promoting the use of ADF formulations that could inadvertently lead to degradation of engine and/or emission control system performance.

Throughout the history of diesel fuel regulation in California, ARB and the Division of Measurement Standards (DMS) have relied on ASTM International standards for both fuels and test methods. In the Proposed Regulation, ARB should take those standards and test methods into account in drafting alternative fuel definitions and other appropriate references. Although EMA understands that ARB may wish to defer to the DMS definitions and test methods to avoid duplication and potential for future conflicts, it strongly recommends that ARB achieve that result by making explicit reference to the DMS provisions. Specifically, ARB should modify the sections of the Proposed Regulation set forth below to read as follows:

§2293.2(b) “Biodiesel” – “Biodiesel” means a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, designated B100, and meeting the specifications set forth by the ASTM International and as defined by the California Division of Measurement Standards §4140 (Definitions Used in Title 4, Division 9, Chapters 6 and 7).

§2293.2(g) “B20” – “B20” means a concentration from 6. to 20. volume percent biodiesel meeting the specifications set forth by ASTM International and as defined by the California Division of Measurement Standards §4148(b).

§2293.2(w) “Non-ester renewable diesel” – means a diesel fuel produced from renewable resources that is not a mono-alkyl ester as defined by the California Division of Measurement Standards §4149.

During the Workshop, certain participants requested that §2293.3(b) be modified to provide an exemption for inclusion of additives to CARB diesel fuels in amounts of up to 1.0 volume percent per additive. As fuel producers and distributors noted, it will be challenging to determine the extent of fuel additization that occurs as fuel makes its way through the distribution chain. Allowing up to 1.0 volume percent per additive, however, raises significant concerns for EMA. To the extent anyone in the distribution chain is permitted to add up to 1.0 volume percent of an additive prior to the fuel’s sale or other use, over-additization becomes a real and significant concern. Thus, EMA recommends that ARB retain the language of §2293.3(b) in the current draft of the Proposed Regulation.

As described during the Workshop, biodiesel is currently considered to be in Stage 3A of the proposed phase-in requirements as defined by §2293.5. As such, the significance threshold for biodiesel is proposed to be B10, however, the effective ADF blend level for biodiesel is estimated to be less than B1. These numbers suggest that significant time will elapse before the Executive Officer determines that the biodiesel ADF blend level has reached the threshold requiring NOx mitigation. EMA supports the proposed approach, but it has significant concerns associated with uncontrolled use of biodiesel blends greater than B20. Historically, the DMS experimental fuel program has been utilized to allow the limited use of blends between B50 and B100. Although EMA has no objection to the experimental fuel program, it fails to include fuel blends greater than B20 and less than B50. In light of ARB’s determination that NOx emission increases of biodiesel blends greater than B20 cannot successfully be mitigated, EMA requests that ARB modify the Proposed Regulation such that all biodiesel blends greater than B20 be considered experimental fuels controlled by the DMS experimental fuel program.

As set forth in Appendix A §(a)(1), ARB proposes to mitigate NOx in biodiesel blends of up to B20 by utilizing B100 blendstocks that contain at least 5.0 percent di-tert-butyl peroxide (DTBP) by volume. EMA has significant concerns associated with the marketability of such a fuel, as well as its viability in terms of engine functionality and performance. Biodiesel blends of B6-B20 meeting ASTM D7467 must maintain a minimum oxidation stability of 6 hours. Although no information is currently available regarding the stability of B20 blends utilizing B100 blendstock containing 5.0 percent of DTBP by volume, several research studies associated with biodiesel oxidation stability have confirmed that peroxides, such as DTBP, significantly reduce biodiesel oxidation stability. Thus, EMA recommends that the proposed 5.0 percent DTBP by volume NOx mitigation alternative be withdrawn from the Proposed Regulation pending determination of its ability to meet ASTM D7467 stability criteria and engine manufacturer approvals, for completion of Stage 2 as outlined in the Proposed Regulation. See § 2293.5(b)(6)(C).

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EMA looks forward to continuing to work with ARB in the development of the Proposed Regulation. If additional information or clarification is required, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger T. Gault", with a long horizontal flourish extending to the right.

Roger T. Gault
Vice President, Regulatory Activities