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October 19, 2017

Jim Aguila
Chief, Climate Change Program Planning
and Management Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: Comments on 2018 LCFS Preliminary Draft Regulatory Amendment Text.

Dr. Mr. Aguila:

The National Biodiesel Board (NBB) appreciates the efforts that California Air Resources Board (ARB) staff have made to improve the landmark Low Carbon Fuel Standard (LCFS). We are pleased to have the opportunity to provide feedback on the draft regulatory amendment text. Thank you, in advance for your consideration of our views on these important issues.

Section 95491(d)(1)(B), Temperature and Volume Corrections.

The National Biodiesel Board would like to express its most serious concerns about this potential amendment. Temperature and volume corrections for all liquid fuels are already covered under federal regulations. Specifically, for renewable fuels and biodiesel, this was addressed by the U.S. Environmental Protection Agency (EPA) under the Renewable Fuel Standard (RFS) in 2009/2010. At that time, the EPA had also proposed another unique temperature compensation equation for biodiesel. I have included for your reference a copy of the RFS2 preamble final rule (pp. 151-154) that outlines the rationale and decision by the EPA to simplify the equations allowed and provide consistency to the entire fuels industry.

The entire fuels industry has relied upon the API Refined Products Table 6B (ASTM D1250) for decades to determine volume corrections to a unified 60 degrees F. Other API Tables such as 5B, 3, and 8 helps convert observed API Gravities to 60 deg. F; convert from API Gravity to density and specific gravity; and to accurately convert volume to weight. These calculations are used not just by fuel producers, but by distributors, hauling companies, fuel marketers, regulators, and every customer throughout the supply chain to help ensure conformance to regulations and sales agreements. These same tables and calculations are now cited within the federal register and state regulations to determine fuel volumes required for Product Transfer Documents (PTDs), Bills of Lading (BOLs), and renewable RIN generation. A fuel batch volume is never just determined a single time in the marketplace. Each tank, vessel, container

and transference is measured to confirm volume transactions. Requiring additional measurements and unique volume calculations under the LCFS in California would lead to confusion in the marketplace, and possible misrepresentation renewable RINs, blended fuel calculations and sale volumes.

The NBB agrees that ASTM D4052 would be the preferred standardized test method to determine Density, but other methods such as D1298 can provide as equally accurate and more cost-effective option for the industry. ASTM International provides internationally recognized consensus standards that are continually updated to address improvements in technology and industry standards. The NBB would prefer to allow for these improvements to test method accuracy and precision by dropping the year revision from any cited ASTM standards. This would allow the fuels industry to adopt such improvements with continual updates to the ASTM standards.

In addition to citing ASTM standard test methods, the NBB also suggests citing standards D4057 and D4177 on manual and automatic sampling practices. Standard industry practice is to obtain samples from three levels of a tank or vessel. Samples are often composited from the Top/Upper, Middle, and Lower/Bottom samples for testing. Once temperatures are obtained from these representative levels, the density measurement is often measured on a composite sample (1/3 from each of the level samples) or all-levels sample. Consensus industry definitions for these terms can also be found within ASTM D4057. Citing these sampling standards would provide uniform guidance that is already in place throughout the industry, and provides consistency when dealing with different shaped containers (horizontal vs. vertical tanks).

Many locations, when transferring fuels into different tanks and containers typically used state certified metering systems. The systems provided by several manufacturers already utilize these same calculations and Tables described herein. These meters are temperature compensated back to 60 degrees F. and volume compensated using the same API Tables embedded within their computer controls. Requiring additional calculations and measurements under the LCFS would be an undue burden upon the fuels industry in California.

Section 95488.7, Specified Source Feedstocks.

While we appreciate and share the ARB's interest in taking measures to protect the integrity of the program, we are concerned that the way in which this provision is drafted may create an unfair playing field between various fuels (e.g. natural gas vs. biodiesel) and places unnecessary cost and liability burdens on biodiesel and renewable diesel producers. We would like to explore the possibility of the ARB using existing authority to accomplish this goal, and in so doing, more selectively apply compliance costs and potentially alleviate the liability placed on biodiesel and renewable diesel producers.

Section 95488.9, Recordkeeping Requirements.


Under the preliminary draft, fuel pathway holders would be required to maintain records for a period of 10 years. This represents an additional financial cost for both large and small producers. While this may seem trivial, the costs of this regulation—and many others—add up and become significant. For this reason, we suggest aligning the provision with the federal Renewable Fuel Standard requirement of five years.

Percent CI Reduction for Gasoline, Diesel and Jet Fuel.

The staff presentation included some initial thinking (slide 19) regarding what the carbon intensity reduction requirements might be for years 2021 through 2030. As other workshop participants noted, we are concerned about the prospect of freezing the program at 10% for a period of three years. While we would be willing to discuss the magnitude of the increases each year, we feel strongly that the standard should move forward each and every year of the program. In our view, a three-year freeze in the relative near-term could destabilize carbon prices and decrease investment, both by upstream and downstream entities. Ultimately, a strong and consistent market signal is needed to produce the changes needed to meaningfully address the climate challenges that many in our industry and the State of California are so passionate about.

Thank you, in advance, for your consideration of our views on this matter. If we may be of any assistance, please feel free to contact us at any time.

Sincerely,



Shelby Neal
Director of State Government Affairs

The Administrator signed the following rule on February 3, 2010 and we are submitting it for publication in the *Federal Register*. While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule. Please refer to the official version in a forthcoming *Federal Register* publication or on GPO's Web Site. You can access the *Federal Register* at: www.gpoaccess.gov/fr/index.html. When using this site, note that text files may be incomplete because they don't include graphics. Instead, select Adobe Portable Document File (PDF) files.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 80

[EPA-HQ-OAR-2005-0161; FRL-XXXX-X]

RIN 2060-A081

Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Under the Clean Air Act Section 211(o), as amended by the Energy Independence and Security Act of 2007 (EISA), the Environmental Protection Agency is required to promulgate regulations implementing changes to the Renewable Fuel Standard program. The revised statutory requirements specify the volumes of cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel that must be used in transportation fuel. This action finalizes the regulations that implement the requirements of EISA, including the cellulosic, biomass-based diesel, advanced biofuel, and renewable fuel standards that will apply to all gasoline and diesel produced or imported in 2010. The final regulations make a number of changes to the current Renewable Fuel Standard program while retaining many elements of the compliance and trading system already in place. This final rule also implements the revised statutory definitions and criteria, most notably the new greenhouse gas emission thresholds for renewable fuels and new limits on renewable biomass feedstocks. This rulemaking marks the first time that greenhouse gas emission performance is being applied in a regulatory context for a nationwide program. As mandated by the statute, our greenhouse gas emission assessments consider the full lifecycle emission impacts of fuel production from both direct and indirect emissions, including significant emissions from land use changes. In carrying out our lifecycle analysis we have taken steps to ensure that the lifecycle estimates are based on the latest and most up-to-date science. The lifecycle greenhouse gas assessments reflected in this rulemaking represent significant improvements in analysis based on information and data received since the proposal. However, we also recognize that lifecycle GHG assessment of biofuels is an evolving discipline and will continue to revisit our lifecycle analyses in the future as new information becomes available. EPA plans to ask the National Academy of Sciences for assistance as we move forward. Based on current analyses we have determined that ethanol from corn starch will be able to comply with the required greenhouse gas (GHG)

threshold for renewable fuel. Similarly, biodiesel can be produced to comply with the 50% threshold for biomass-based diesel, sugarcane with the 50% threshold for advanced biofuel and multiple cellulosic-based fuels with their 60% threshold. Additional fuel pathways have also been determined to comply with their thresholds. The assessment for this rulemaking also indicates the increased use of renewable fuels will have important environmental, energy and economic impacts for our Nation.

DATES: This final rule is effective on July 1, 2010, and the percentage standards apply to all gasoline and diesel produced or imported in 2010. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of July 1, 2010.

ADDRESSES: EPA has established a docket for this action under Docket ID No. **EPA-HQ-OAR-2005-0161**. All documents in the docket are listed in the www.regulations.gov web site. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through www.regulations.gov or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: Julia MacAllister, Office of Transportation and Air Quality, Assessment and Standards Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor MI 48105; Telephone number: 734-214-4131; Fax number: 734-214-4816; E-mail address: macallister.julia@epa.gov, or Assessment and Standards Division Hotline; telephone number (734) 214-4636; E-mail address asinfo@epa.gov.

SUPPLEMENTARY INFORMATION:

General Information

I. Does this Final Rule Apply to Me?

Entities potentially affected by this final rule are those involved with the production, distribution, and sale of transportation fuels, including gasoline and diesel fuel or renewable fuels such as ethanol and biodiesel. Regulated categories include:

We are not finalizing additional RIN-related flexibilities for small refiners in today's action. As highlighted in the NPRM, we continue to believe that the concept of interchangeable RINs for small refiners only fails to require the four different standards mandated by Congress (e.g., conventional biofuel could not be used instead of cellulosic biofuel or biomass-based diesel), and is not consistent with section 211(o) of the Clean Air Act. Essentially, it would circumvent the explicit direction of Congress in EISA to require that the four RFS2 standards be met separately. Further, given the findings from the DOE study that small refineries (and thus, most small refiners) do not currently face disproportionate economic hardship, and are not expected to do so as RFS2 is implemented, we do not believe that a basis exists to justify providing small refiners with a larger rollover cap than other regulated entities. Thus, small refiners will be held to the same RIN rollover cap as other obligated parties.

F. Retail Dispenser Labeling for Gasoline with Greater than 10 Percent Ethanol

We proposed labeling requirements for fuel dispensers that handle greater than 10 volume percent ethanol blends which included the following text: For use only in flexible-fuel vehicles, May damage non-flexible-fuel vehicles, Federal law prohibits use in non-flexible-fuel vehicles. This proposal was primarily meant to help address concerns about the potential misfueling of non-flex-fuel vehicles with E85, in light of the anticipated increase in E85 sales volumes in response to the RFS2 program. All ethanol blends above 10 volume percent were included due to the increasing industry focus on ethanol blender pumps that are designed to dispense a variety of ethanol blends (e.g., E30, and E40) for use in flex-fuel vehicles.

Commenters stated that EPA should undertake additional analysis of the potential impacts from misfueling and what preventative measures might be appropriate before finalizing labeling requirements for >E10 blends. They also stated that EPA should coordinate any such labeling provisions with those already in place by the Federal Trade Commission. EPA is also currently evaluating a petition to allow the use of up to 15 volume percent ethanol in non-flex fuel vehicles. One potential result of this evaluation might be for EPA to grant a partial waiver that is applicable only for a subset of the current vehicle population. Under such an approach, a label for E15 fuel dispensers would be needed that identifies what vehicles are approved to use E15.

Based on the public comments and the fact that EPA has not completed its evaluation of the E15 waiver petition, we believe that it is appropriate to defer finalizing labeling requirements for >E10 blends at this time. This will afford us the opportunity to complete our analysis of what measures might be appropriate to prevent misfueling with >E10 blends before this may become a concern in the context of the RFS2 program.

G. Biodiesel Temperature Standardization

The volume of a batch of renewable fuel can change under extreme changes in temperature. The volume of a batch of renewable fuel can experience expansion as the temperature increases, or can experience contraction as temperature decreases. The Agency requires temperature standardization of renewable fuels at 60 ° Fahrenheit (°F) so renewable fuel volumes are accounted for on a uniform and consistent basis over the entire fuels industry. In the May 1,

2007 Renewable Fuels Standard (RFS) final rule the Agency required biodiesel temperature standardization to be completed as follows:

$$V_{s,b} = V_{a,b} \times (-0.0008008 \times T + 1.0480)$$

Where

- $V_{s,b}$ = Standard Volume of biodiesel at 60 degrees F, in gallons;
- $V_{a,b}$ = Actual volume of biodiesel, in gallons;
- T = Actual temperature of batch, in degrees F.

This equation was based on data from a published research paper by *Tate et al.*³⁶ Members of the petroleum industry have indicated that the current biodiesel temperature standardization equation in the regulations provides different results than that commonly used by both the petroleum and biodiesel industry for commercial trading of biodiesel. These commercial values are either based on American Petroleum Institute (API) tables for petroleum products or on empirical values from industry measurements at common temperatures and pressures observed in bulk fuel facilities. The difference between RIN calculated volumes and commercial sales volumes has created confusion within the record keeping system of both the petroleum and biodiesel industry.

In the RFS2 proposed rule, the Agency proposed the temperature standardization of biodiesel remain unchanged from the RFS1 requirements.³⁷ The Agency received comments from Archer Daniels Midland Company (ADM), World Energy Alternatives, Marathon Petroleum Company (Marathon) and the National Biodiesel Board (NBB) to revise the biodiesel temperature standardization equation.

Both ADM and NBB agreed on the necessity for biodiesel temperature standardization at 60 °F. ADM and NBB commented on several empirical calculations which have been developed specific to biodiesel temperature standardization since the 2007 RFS1 final rule. These include a 2004 data set developed by the Minnesota Department of Commerce and the Renewable Energy Group and updated in 2008; information embedded in the European Biodiesel Specification EN 14214; and information from the Alberta Research Council. The table below provides values from NBB for 1000 gallons of biodiesel standardized to a temperature at 60 °F for these empirical calculations, along with the current EPA equation, and the American Petroleum Institute (API) Refined Products Table 6.

Table III.G-1
NBB Comparison of Biodiesel Temperature Standardization Calculations to 60°F for 1000 gallons of Biodiesel at 90°F

2007 EPA Biodiesel Formula	975.28 gallons
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³⁶ Equation was derived from R.E. Tate et al. "The Densities of Three Biodiesel Fuels at Temperatures up to 300°C.", Department of Biological Engineering, Dalhousie University, April 2005. "Fuel 85 (2006) 1004-1009, Table 1 for soy methyl ester."

³⁷ 74 FR 24943, May 26, 2009.

2008 Minnesota (Hedman) data	986.270 gallons
API Refined Products Table 6 (biodiesel density @ 7.359)	986.625 gallons
Alberta Research Council	986.238 gallons
EN 14214 data	986.401 gallons
2004 Minnesota Renewable Energy Group data	986.830 gallons

As illustrated by the results from the above table, the values for the various biodiesel temperature standardization empirical calculations are within 1 gallon of agreement of each other for a 1000 gallon biodiesel batch, except for the current biodiesel temperature standardization equation in the regulations.

To ensure consistency in RIN generation, ADM commented EPA should adopt only one biodiesel temperature standardization calculation. ADM commented that all biodiesel temperature standardization calculations developed, including the API Refined Products Table 6, are in very close agreement with each other and the differences between them all are insignificant. They further commented the API Refined Products Table 6 has provided a uniform measurement of volume for years for the entire liquid fuels industry. Thus, ADM believes the API Refined Products Table 6 should be adopted for biodiesel to be consistent with the calculation of sales volumes. Finally ADM comments adoption of the API Refined Products Table 6 would allow for easier verification within the marketplace, eliminate the need for calculating one volume for sales and trades and another for RINs, and prevents the entire distribution network from facing the financial burden of reprogramming existing meters that already are based on the API Refined Products Table 6.

NBB commented that earlier surveys from its members indicate a fifty-fifty split between members using the API Refined Products Table 6 or some variation of the current EPA biodiesel formula for biodiesel temperature standardization. Some NBB members indicated that the API Refined Products Table 6 was more commonly used by the petroleum industry and embedded into the meters, pumps and accounting systems of the petroleum industry. Companies already using the API Refined Products Table 6 would have a reduction in required paperwork with RIN generation and tracking because already existing commercial documents could serve that purpose and they thus could eliminate or reduce their current dual tracking system. Other NBB members have already embedded the current EPA biodiesel equation within their accounting and sales systems and would like to continue using that type of biodiesel temperature standardization approach rather than the API Refined Products Table 6. The NBB recommended EPA revise its current equation in the regulations to the 2008 Hedman biodiesel temperature standardization equation. Thus, NBB commented EPA should provide flexibility to their members by allowing the use of either the API Refined Products Table 6 or the use of a biodiesel temperature standardization equation.

Marathon commented the regulations allow for the standardization of volume for other renewable fuels to be determined by an appropriate formula commonly accepted by the industry which may be reviewed by the EPA for appropriateness. They recommended that EPA extend this courtesy to biodiesel.

The Agency acknowledges that the current biodiesel temperature standardization equation is likely not correct for biodiesel temperature standardization at ambient temperatures observed in the fuel distribution system. Based on the comments received, the Agency is amending the regulations to allow for two ways for biodiesel temperature standardization: 1) the American Petroleum Institute Refined Products Table 6B, as referenced in ASTM D1250-08, entitled, "Standard Guide for Use of the Petroleum Measurement Tables", and 2) a biodiesel temperature standardization equation that utilizes the 2008 data generated by the Minnesota Department of Commerce and the Renewable Energy Group. These two methods for biodiesel temperature standardization are within one gallon of agreement of each other for a 1000 gallon biodiesel batch and thus in very close agreement. Both ADM and NBB acknowledged that the differences between these two methods are insignificant and the resulting corrected volumes from these two methods of calculation are within accuracy tolerances of any metered measurement. Thus, the Agency believes the allowance of both of these methods for biodiesel temperature standardization will increase flexibility while still providing for a consistent generation and accounting of biodiesel RINs over the entire fuel delivery system.