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**Via Electronic Filing**

Air and Radiation Docket and Information Center  
Environmental Protection Agency  
Mailcode: 2822T  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460  
ATTENTION: Docket ID EPA-HQ-OAR-2005-0161

Re: Regulation of Fuels and Fuel Additives: Changes to the Renewable Fuel Standard, 74 Fed. Reg. 24,904 (May 26, 2009), and the Notice of Availability of Expert Peer Review Record, 74 Fed. Reg. 41,359 (Aug. 17, 2009)

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Dear Sir or Madam:

The National Biodiesel Board (NBB), the trade association for the U.S. biodiesel industry, is pleased to submit the attached comments on the proposed rule entitled Regulation of Fuels and Fuel Additives: Changes to the Renewable Fuel Standard, 74 Fed. Reg. 24,904 (May 26, 2009), and the Notice of Availability of Expert Peer Review Record, 74 Fed. Reg. 41,359 (Aug. 17, 2009). The proposed rule seeks to implement the amendments to the Renewable Fuel Standard program (RFS2) in the Energy Independence and Security Act of 2007 (EISA) (P.L. 110-140). NBB appreciates EPA's efforts in this regard, and supports the goal of implementing a workable program by January 1, 2010.

We urge the EPA to implement a workable program that allows all biodiesel feedstock to qualify as part of the Biomass-based Diesel program. It is also important for EPA to implement the program by January 1, 2010, which should include the volume requirements from both 2009 and 2010 in calendar year 2010.

We are concerned that EPA has created a regulatory rule that is not based on sound science or accepted economic principles. NBB specifically highlights the fundamental mistakes in the methodology created and used by the EPA. Nevertheless, in using the EPA methodology, with the appropriate inputs, the lifecycle Greenhouse Gas (GHG) emission reductions for biodiesel from vegetable oils is 99 percent lower than baseline petroleum.

The U.S. biodiesel industry is comprised primarily of small companies. The average plant has less than 20 employees and an annual production capacity of less than 15 million gallons. Accordingly, we encourage EPA to create a regulatory framework that will simplify biodiesel distribution. NBB's comments demonstrate several ways to simplify the Renewable Identification Numbers (RINs) reporting system and implement an accurate system to certify qualifying feedstock.

We look forward to working with EPA to successfully implement a workable RFS2 program that achieves worthwhile policy objectives that come from displacing petroleum with domestically produced biodiesel.

#### **I. EPA Must Implement the Volume Mandates for Biomass-based Diesel.**

With passage of EISA, Congress sought to realize the energy security, environmental, and economic benefits associated with increased domestic production and use of biofuels. As part of the RFS2 Advanced Biofuels schedule, EISA provides a Biomass-based Diesel mandate that for the first time establishes a renewable requirement for U.S. diesel fuel.

The Biomass-based Diesel schedule requires the domestic use of 500 million gallons in 2009; 650 million gallons in 2010; 800 million gallons in 2011; and 1 billion gallons in 2012. From 2013 through 2022, RFS2 requires the use of 1 billion gallons, and the Administrator of the EPA is given the authority to increase the minimum volume requirement. Biodiesel is the only fuel readily available in commercial quantities that meets the definition of Biomass-based Diesel.

Congress required EPA to issue revised regulations by December 19, 2008 to ensure that the mandated volumes are met *each year*. The delay in implementing these changes has resulted in uncertainty and economic hardship for the biodiesel industry. Given the lack of an enforceable regulatory requirement, obligated parties have declined to purchase biodiesel in volumes consistent with their RFS2 Biomass-based Diesel obligations. To ensure continued investment and realization of the environmental and economic benefits derived from a vibrant biodiesel industry, NBB supports timely implementation of a *workable* RFS2 program.

In recognition of the 2009 and 2010 statutory volume requirements for Biomass-based Diesel, EPA has proposed combining the 2009 and 2010 mandates and allowing obligated parties to defer showing compliance until 2011. NBB supports this approach. However, EPA would need to issue regulations prior to January 1, 2010 to ensure that the volume requirements under this scenario are met. NBB is concerned that, due to the ongoing work needed to complete the lifecycle analysis under the proposed rule, a final rule will not be issued in a time frame that would accommodate the approach described above. Consistent with the proposed rule, NBB urges EPA to issue renewable volume obligations (RVOs) this year for the 2010 required volumes for renewable fuel, Advanced Biofuels and Biomass-based Diesel, which

would include the 2009 volume for Biomass-based Diesel. Issuing RVOs this year for each of these mandates would provide certainty for stakeholders and ensure that the mandated volumes required by EISA are met.

Until EPA can finalize the RFS2 regulations, the current RFS regulations can be used to implement the volume requirements for Advanced Biofuels and Biomass-based Diesel. As EPA recognizes in the proposed rule, the current RIN is coded for biodiesel and renewable diesel, which can be used to show compliance with the Biomass-based Diesel and Advanced Biofuel mandates. Even if portions of the RFS2 program must be delayed as EPA continues to work on the final rule, EPA must ensure an interim program is in place so that the annual mandated volumes are met for 2009 and 2010, as required by the statute. This is a non-discretionary duty of EPA.

## **II. EPA Must Ensure the Final Rule Implements a Workable and Practical Program.**

NBB shares EPA's desire to implement a workable, successful RFS2 program. NBB, however, continues to have substantial concerns with various aspects of the proposed rule, as outlined in the attached comments. The main concerns are summarized below.

### **A. EPA should revise the RFS2 proposal to eliminate unnecessary or overly burdensome requirements related to the RIN system that do little if anything to promote the policy objectives of the RFS-2 program.**

NBB supports EPA's efforts to build on the current RFS program, which has generally provided a practical framework in which to implement the RFS mandates. However, NBB is concerned that EPA has added various registration, certification, and reporting requirements that place substantial and undue burdens on the renewable fuel industry, which should be eliminated.

#### **1. *The proposal related to the EISA renewable biomass definition is arbitrary and capricious and should be eliminated.***

- EPA impermissibly reads the statute to require renewable fuel producers to certify that feedstock came from agricultural land that has been under "continuous" active management since December 19, 2007 (EISA date of enactment). EISA's requirement that biofuel feedstock come from "existing agricultural land" is meant to ensure that forestland and other environmentally sensitive lands are not converted to cropland. Congress did not intend for EPA to regulate farmers or agricultural practices. EPA is essentially requiring farmers to identity preserve their crops, which will add a substantial cost of compliance on feedstock providers and renewable fuel producers.

- EPA's proposal also ignores the fact that renewable fuel producers obtain a substantial portion of their feedstock from centralized locations that comingle feedstock from a variety of sources, and not directly from the feedstock producer. Failure to consider this issue renders EPA's proposal arbitrary and capricious.
2. *Certification and documentation requirements for "existing agricultural land" unfairly burdens crop-based biofuels and should be eliminated. There is sufficient information available for EPA to enforce the "existing agricultural land" requirement through a rebuttable presumption without creating a burdensome administrative program that imposes substantial burdens on renewable fuel producers.*
- There is simply no need for an extensive administrative program related to the renewable biomass definition. Potential liabilities associated with using feedstock that does not meet the renewable biomass definition will appropriately drive industry behavior. Conversely, the substantial compliance burdens EPA would impose on feedstock providers and biodiesel producers will artificially restrict available feedstock for biofuels. Historically, cultivated cropland in the United States has been on the decline, and there is sufficient unused cropland that can be used to produce feedstock that is compliant with EISA to meet the potential increased demand for U.S. biodiesel. In addition, existing U.S. Department of Agriculture (USDA) regulations ensure that forestland and other environmentally sensitive lands will not be cleared to produce feedstock for U.S. biodiesel production.
  - Instead, EPA should focus its enforcement efforts on targeting the likely few, if any, violators of these requirements. There is ample information available for EPA to identify whether "new" lands have been cleared for the production of biofuel feedstock without imposing burdensome requirements on renewable fuel producers or feedstock providers. Given existing protections for environmentally sensitive lands, EPA should presume that the renewable biomass requirements are met barring any evidence of actual violations.
3. *EPA's new registration and reporting requirements should be revised to eliminate unnecessary and burdensome requirements.*
- While NBB generally supports EPA's expanded registration requirements, the requirement for an on-site engineering review contained in the proposed rule is unwarranted. Facilities already must present information related to production processes and energy use to state and federal regulatory agencies, including the EPA. EPA provides no justification why the additional burden of requiring a costly, independent on-site engineering review is necessary.

- NBB opposes requiring the reporting of RIN price information with RIN transaction reports. Price information is considered confidential business information, and EPA does not need this information to implement the RIN program.
  - For similar reasons, NBB also opposes requiring annual production outlook reports. Biodiesel producers report production and feedstock data to the Energy Information Administration (EIA), and cumulative industry information is readily available to the public. Further, there is no justification for EPA to request the business plans of individual facilities.
4. *EPA should structure the RFS2 RIN program in a manner that ensures the Advanced Biofuels volume requirements provided for in EISA are met.*
- NBB supports EPA's proposal to retain equivalence values for biodiesel and renewable diesel, but not for those RINs being used toward the Biomass-based Diesel or Advanced Biofuel mandates. Unlike the existing RFS program where biodiesel is competing with corn ethanol, the Advanced Biofuel mandates should be met on a gallon to gallon basis.
  - Allowing renewable fuel producers to separate RINs will result in a more efficient and streamlined program. Thus, NBB supports the alternative identified by EPA to remove the prohibition restricting the separation of RINs to obligated parties
  - NBB rejects other alternatives identified by EPA that contravene the explicit waiver criteria established in EISA and that would result in the reduction of RFS2 mandated volumes established by Congress. NBB specifically objects to any increase in the 20 percent rollover cap. Further, EPA should not allow any rollover or, at a minimum, the cap should be lowered to 10 percent. Biodiesel RINs are readily available in the marketplace and the annual RFS2 volume requirements provided for in statute are minimum levels that are clearly meant to increase the use of renewable fuels and displace petroleum.

### **III. EPA Must Correct its Proposed Lifecycle Analysis for Biodiesel.**

The lifecycle analysis utilized by EPA in the proposed rule inaccurately concludes that soy-based biodiesel reduces GHG emissions by 22% compared to petroleum. This significantly understates the GHG emission reductions associated with biodiesel use. As a result, the proposed rule would essentially disqualify biodiesel produced from vegetable oil, including soy-based biodiesel, from the Biomass-based Diesel or Advanced Biofuels schedule. Soybean oil represents nearly 60 percent of the feedstock used in the U.S. to produce biodiesel, and biodiesel is the only domestic fuel available in commercial quantities that meets the definition

of Biomass-based Diesel. Congress clearly contemplated the use of biodiesel produced from vegetable oil when it set EISA's volume requirements for Biomass-based Diesel and Advanced Biofuels, and the ability to meet these minimum volume targets will be put in jeopardy if biodiesel produced from soybean oil and other vegetable oils is disqualified from the program.

A. A lifecycle analysis incorporating international indirect land use changes does not rise to the level of scientific objectivity and validity for regulatory purposes.

Congress did not intend for EPA to include emissions from international indirect land use changes to disadvantage biofuels in favor of petroleum, particularly in light of the statutory language that focuses on *domestic indirect emissions* and the statutory purpose to promote a *domestic biofuels industry*. EPA's analysis substantially disadvantages crop-based biofuels, undermining Congressional intent. This largely stems from the failure of the economic models used by EPA, including the Winrock satellite data, to comport with principles of scientific objectivity and general standards for lifecycle analyses. It is insufficient to claim that international indirect land use changes should be included in the lifecycle methodology simply because there are some models available. These models must be reasonable for use in a regulatory context. The final lifecycle analysis *should not* include emissions from international indirect land use changes, which are simply speculative and for which there currently is no generally accepted or valid economic or scientific modeling to estimate.

Any lifecycle analysis that does include emissions from international indirect land use changes must address the following key issues:

1. *There must be a causal link between U.S. biofuel production and "significant" land use changes occurring internationally.* Any analysis must take into account the numerous other factors that influence land use decisions. In particular, EPA must consider the operation of the soybean market, which is driven by demand for soybean meal, not soybean oil. The statutory requirement that the emissions be related to the full "fuel" lifecycle and that indirect emissions be "significant," including "significant" land use changes imposes an important causal connection, because EPA is seeking to penalize renewable fuel producers for emissions over which they have no control. This proposal actually undermines, rather than fulfills, Congressional intent.
2. *There must be consistent system boundaries, and analysis must include both direct and indirect land use changes associated with the baseline petroleum.* Petroleum exploration and production have direct and indirect land use impacts. For example, oil production in the Amazon rainforest and the road construction and settlements that accompany this activity cause land use changes. While EPA's ability to use a later time frame for baseline petroleum may be restricted by the statute, EPA should adjust its lifecycle modeling to account for the fact that petroleum is a finite resource and additional, marginal sources will increasingly become prominent petroleum sources. EPA can do so

by focusing on the marginal sources of petroleum in 2005 to establish the baseline to provide a more accurate comparison of the benefits of renewable fuels in replacing petroleum. EPA can also give biofuels credit for the avoidance of emissions from these marginal sources of petroleum, which can have substantially greater GHG emissions than lighter forms of crude oil.

3. *The models used must be transparent and be capable of being reproduced.* Both the FASOM and FAPRI models used by EPA to estimate land use changes associated with renewable fuels and EPA's adjustments to those models lack sufficient transparency for the public to understand the methodology and results. The public has been unable to reproduce EPA's results due to this lack of transparency. Because the results of the analysis are highly dependent on inputs, EPA should, at a minimum, include sensitivity analysis so that the public can assess how its choice of assumptions and inputs affected the analysis. The sensitivity analyses should include, but not be limited to, the following: (a) productive use of the standing biomass prior to the hypothetical land conversion event; (b) how the land was managed after the hypothetical land conversion event; (c) variations in increasing U.S. biofuel production over various timeframes, rather than assuming the entire growth occurs in 2022; and (d) analysis of allocation of other uses for the land at issue.
4. *The analysis must be validated against real world data.* To assign an emissions amount to biofuel production, EPA must validate its modeling against real world data. A backcast uses the model and actual data for assumptions to look backwards and evaluate how well the model performs against actual history. Analysis of the FAPRI model and EPA's results have found inconsistencies between the results of change in exports from FASOM and FAPRI and between GTAP, used by California, and FASOM and FAPRI. This illustrates that the models EPA has used are not reliable for regulatory purposes. In fact, there is significant empirical evidence to indicate U.S. biodiesel production will have minimal, and perhaps zero, impact on land use changes.
5. *The analysis must have an adequate explanation of uncertainty.* EPA should conduct a formal uncertainty analysis, such as a standard Monte Carlo analysis.
6. *The analysis should use an impact time-frame of 100 years, but should not apply a discount rate.* NBB supports EPA's proposed time frame of 100 years for lifecycle analysis, due to the fact that GHG emissions have long-term impacts. However, NBB disputes the need to use a discount rate to assess physical GHG emissions. The detrimental effects of current emissions may actually be higher in the future. Conversely, the future benefits of GHG emission reductions should be treated the same as current benefits.

- B. EPA's modeling pertaining to international indirect land use changes has been severely compromised by inaccurate assumptions, lack of credible data on land use change, and methodological shortcomings. Additional research and data is required to produce a sound, science based estimate of the impact, if any, that U.S. biofuels production has on land use decisions abroad.

EPA has relied upon questionable data and assumptions relating to international indirect land use change. The Winrock satellite data has a 70% accuracy rate. EPA calculations attribute all forest harvesting emissions to indirect land use emissions to agriculture. Further, emissions resulting from natural deforestation, forest fires, disease and climate damage were also charged to agriculture. Yet events or land use changes that resulted in the land having more carbon was excluded from the calculations. These incorrect assumptions disproportionately penalize U.S. biodiesel producers for unrelated land use changes outside the United States.

1. EPA's assumption that trees live forever is incorrect and contrary to established United Nations Intergovernmental Panel on Climate Change (IPCC) guidelines. Carbon losses associated with natural disturbances and mortality should be included in the calculation. These factors have a far greater impact on GHG emissions than lost sequestration and can have a huge impact on emission calculations. Accurately accounting for natural disturbances in soy-based biodiesel's GHG emission profile would increase lifecycle emission reductions by approximately 25 percent compared to baseline petroleum. The inclusion of accurate assumptions regarding both natural disturbances and mortality could increase the reduction by approximately 55 percent compared to baseline petroleum.
2. EPA's methodology assumes that 20 percent of the new land dedicated to soybean cultivation comes from Paraguay. In the absence of any credible land use data for Paraguay, EPA relied upon a "world average" based on 10 countries. This is highly unreliable. For example, if land use data for Argentina was utilized, the indirect GHG emissions for soy-based biodiesel would decrease by approximately 10 percent. In addition, Paraguay has nearly 2.47 million acres of summerfallow land and effective measures in place to curb deforestation. Properly accounting for this would reduce the indirect GHG emissions for soy-based biodiesel by 20 percent.
3. EPA's international indirect land use calculations assume that 10 percent of new land comes from India. India currently has over 61 million acres of fallow land, of which approximately 60% is current fallow. Emissions associated with international indirect land use changes in India will be zero under any reasonable assumptions relating to increased production demand.



4. EPA assumes that pastureland converted to cropland would in turn be replaced by forestland converted to pastureland. This assumption is inaccurate, and EPA attributes 25 percent of indirect emissions to these activities. Further, EPA's assumptions regarding the rate of wood harvesting is inconsistent with actual harvesting practices and other assumptions with respect to biomass inventory. Correcting these assumptions could reduce GHG emissions associated with indirect land use emissions by as much as 10 percent.
- C. Key corrections need to be made to the lifecycle analysis for biodiesel. Notwithstanding indirect emissions from international land use changes, key aspects of EPA's lifecycle analysis should be revised, at a minimum, to address the following:
1. *Nitrogen fixing in soil was incorrectly included.* FASOM does not use the most updated nitrogen findings from the IPCC, and thus, attributes excess nitrogen emissions to soybean cultivation. Using updated IPCC data from 2006 regarding nitrogen fixation decreases EPA's emissions analysis for soy-based biodiesel by more than 20 percent.
  2. *The energy balance data used for biodiesel production is out of date.* NBB recently conducted a comprehensive survey of the biodiesel industry. Using data from this survey, the most updated information available regarding the industry's energy use, decreases EPA's emissions analysis for soy-based biodiesel by 1.5 percent.
  3. *Co-product allocations for glycerin were not incorporated.* EPA's analysis does not include any credits for glycerin, a co-product from biodiesel production. When the emissions value for glycerin is calculated and included in the analysis, it decreases EPA's emissions analysis for biodiesel by at least 15 percent.

GHG emission reductions associated with soy-based biodiesel compared to petroleum will significantly exceed 22 percent if EPA relies on scientifically valid analysis and practices. Even with EPA's assumptions and methodology, correcting the outdated data pertaining to nitrogen fixation, energy balance and co-product allocations would give biodiesel produced from vegetable oil a 62 percent GHG reduction compared to baseline petroleum. When the assumptions from EPA's indirect analysis are corrected, the GHG emissions lifecycle reduction for biodiesel from vegetable oils is 99.2 percent lower than diesel fuel.

The following table highlights the impact of all of the changes that are recommended for the direct and indirect emissions for biodiesel from vegetable oils:

**Table ES- 1 Summary of the Impact of the Impact of the Largest Issues**

Scenarios (Cumulative)	Emissions <sup>1</sup> , g CO <sub>2</sub> /mm BTU	% Reduction from Diesel	Percentage Change
Petroleum Baseline	4,173,768		-
Soy Biodiesel EPA	3,255,109	22.0	-
Less nitrogen fixing crops	2,383,009	42.9	20.9
Glycerine co-product	1,652,196	60.4	17.5
Biodiesel Energy	1,587,696	62.0	1.6
No Pasture Replacement	1,001,019	76.0	14.0
HWP rate	850,027	79.6	3.6
Natural Disturbances	32,740	99.2	19.6

**IV. EPA Should Modify its Pathways to Allow Use of Soy-based Biodiesel to Meet the Biomass-based Diesel and Advanced Biofuel Mandates.**

Soy-based biodiesel is needed to fulfill the volume mandates for Biomass-based Diesel. Soybean oil represents a significant portion of the feedstock available for biodiesel production in the United States. EPA recognizes this by including an alternative in the proposed rule to allow biodiesel producers to use a mixture of vegetable oils and waste oils to meet the 50 percent GHG reduction requirement. Although the biodiesel industry has increasingly utilized a diverse supply of feedstock - such as animal fats and waste grease - the availability of this feedstock is insufficient to comply with the volume mandates for Biomass-based Diesel, even under EPA's proposed 52/48 percent pathway approach. The ideal approach would incorporate an accurate lifecycle analysis that allows all vegetable oil feedstock to qualify as Biomass-based Diesel and Advanced Biofuel. However, should EPA contemplate a blending pathway as outlined in the proposed rule, an approach that allows obligated parties the flexibility to meet the Biomass-based Diesel requirements by mixing RINs to obtain the 50 percent GHG reduction is preferable

Lastly, to the extent necessary, EPA should reduce the 50 percent GHG emission reduction requirement to 40 percent, as is permitted by statute. EPA should also allow renewable fuel producers to present a facility-specific lifecycle analysis to establish that the biofuel they produce meets EISA's GHG emission reduction requirements. This would recognize the efforts facilities have taken to date to reduce their carbon footprint and promote continued investment in improving a facility's efficiency.

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<sup>1</sup> 100 Year Time Frame, 2% discount rate.

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NBB provides more detailed comments in the attached and additional analysis in support. We urge EPA to implement a workable program that fulfills Congress' intent to achieve the energy independence, economic and environmental benefits associated with displacing petroleum with domestically produced biodiesel. In particular, EPA must implement the Biomass-based Diesel mandate in a manner that promotes, not burdens, the U.S. biodiesel industry. NBB looks forward to working constructively with EPA to implement a workable, successful RFS2 program.

Sincerely,



Manning Feraci  
Vice President of Federal Affairs  
National Biodiesel Board