

STATE OF CALIFORNIA
BEFORE THE AIR RESOURCES BOARD

Declaration of James M. Lyons

I, James Michael Lyons, declare as follows:

1. I make this Declaration based upon my own personal knowledge and my familiarity with the matters recited herein. It is based on my experience of nearly 30 years as a regulator, consultant, and professional in the field of emissions and air pollution control. A copy of my résumé can be found in Attachment A.

2. I am a Senior Partner of Sierra Research, Inc., an environmental consulting firm located at 1801 J Street, Sacramento, California owned by Trinity Consultants, Inc. Sierra specializes in research and regulatory matters pertaining to air pollution control, and does work for both governmental and private industry clients. I have been employed at Sierra Research since 1991. I received a B.S. degree in Chemistry from the University of California, Irvine, and a M.S. Degree in Chemical Engineering from the University of California, Los Angeles. Before joining Sierra in 1991, I was employed by the State of California at the Mobile Source Division of the California Air Resources Board (CARB).

3. During my career, I have worked on many projects related to the following areas: 1) the assessment of emissions from on- and non-road mobile sources, 2) assessment of the impacts of changes in fuel composition and alternative fuels on engine emissions including emissions of green-house gases, 3) analyses of the unintended consequences of regulatory actions, and 4) the feasibility of compliance with air quality regulations.

4. I have testified as an expert under state and federal court rules in cases involving CARB regulations for gasoline, Stage II vapor recovery systems and their design, factors affecting emissions from diesel vehicles, evaporative emission control system design and function, as well as combustion chamber system design. While at Sierra I have acted as a consultant on automobile air pollution control matters for CARB and for the United States Environmental Protection Agency. I am a member of the American Chemical Society and the Society of Automotive Engineers and have co-authored nine peer-reviewed monographs concerned with automotive emissions, including greenhouse gases and their control. In addition, over the course of my career, I have conducted peer-reviews of numerous papers related to a wide variety of issues associated with pollutant emissions and air quality.

5. This Declaration summarizes the results of my review of the CARB Notice of Public Availability of Modified Text and Availability of Additional Documents for the Proposed Re-Adoption of the Low Carbon Fuel Standard Regulation on the Commercialization of Alternative Diesel Fuels (the LCFS Regulation) dated June 4,

2015. I have performed this review as an independent expert for Growth Energy. If called upon to do so, I would testify in accord with the facts and opinions presented here.

6. Based on my review of the changes proposed to the LCFS regulation by CARB, the elimination of the multimedia evaluation provisions from the LCFS through the deletion of Section 95490 and related deletions in Sections 95481(a)(59) and 95488(c)(4)(G)6.d. creates the potential for significant adverse environmental impacts to occur as the result of the introduction of new lower carbon intensity fuels. I have participated in every aspect of the development of the LCFS regulation in which a member of the public was allowed by CARB to participate. This change to the proposed regulation could not reasonably have been anticipated, based on the notice of proposed rulemaking and the supporting materials made available in December 2014.

7. The discussion of the need for the multimedia evaluation provisions that CARB staff is now proposing to delete is summarized in both the current Initial Statement of Reasons (ISOR) for re-adoption of the LCFS regulation as well as the ISOR prepared in 2009 for the original LCFS regulation. The language relevant to the multimedia evaluation provisions in both the current and 2009 ISOR is virtually identical. With respect to why the multimedia evaluation provisions were needed in the LCFS, both the ISOR for the re-adoption of the LCFS regulation¹ and the 2009 ISOR² state that:

The LCFS regulation incorporates this principle as a pre-sale prohibition applied to fuels that are subject to an ARB specification that is modified or adopted after adoption of the LCFS regulation. In such cases, regulated parties would be prohibited from selling the affected fuels in California to comply with the LCFS requirements until a multimedia evaluation is approved for those fuels pursuant to H&S §43830.8.

Elimination of the multimedia evaluation provisions from the LCFS regulation as now proposed by CARB staff would permit fuel suppliers to sell new fuels in California in order to try to comply with the LCFS without ensuring that adverse environmental impacts associated with their use have been identified and properly mitigated. Such new fuels could include gasoline-butanol blends, alternative diesel fuels other than biodiesel and renewable diesel, and renewable natural gas fuels that fail to comply with CARB's existing natural gas fuel specifications. In addition, these potential impacts of the LCFS regulation were not considered in the Environmental Analysis prepared for the LCFS and ADF regulations.

8. There are several ways in which new fuels which could lead to adverse environmental impacts could be sold in California before the approval of a multimedia

1. ¹ Page III-64

² Page V-32

evaluation pursuant to H&S §43830.8. The first of these is if the California Division of Measurement Standards (CDMS) rather than CARB adopts fuel specifications allowing the use of the new fuel. In the past, new fuels have been allowed in California through specifications enacted by CDMS that have not been required to undergo multimedia evaluation pursuant to H&S §43830.8. Biodiesel is one such fuel that has created adverse environmental impacts. Based on CARB staff estimates, in 2014, biodiesel use for compliance with the LCFS regulation allowed by CARB³ without an approved multimedia evaluation pursuant to H&S §43830.8 resulted in increased NOx emissions of 1.2 tons per day statewide.⁴ Increased NOx emissions due to the use of biodiesel for purposes of LCFS compliance have occurred since the inception of the LCFS program as a result of CARB's failure to adopt fuel specifications and complete the multimedia evaluation required pursuant to H&S §43830.8 despite having committing to do so as early as 2009.⁵ Elimination of the requirements for approval of a multimedia evaluation before allowing new fuels to be sold for purposes of LCFS approval would allow other new fuels to be sold in California that, like biodiesel, create adverse environmental impacts before those impacts have been identified through the multimedia evaluation process. These potential environmental impacts created by the LCFS as a result the elimination of the LCFS multimedia evaluation requirements were not considered in the Environmental Assessment.

9. That the increases in NOx emissions resulting from biodiesel use in California without an approved multimedia evaluation were significant can be seen through a comparison of the criteria used to assess air quality impacts in areas of California outside the South Coast and San Joaquin Air Basins and the increases in NOx emissions estimated to result from biodiesel use. Using the Sacramento Metropolitan Air Quality Management District as an example,⁶ the significance threshold for NOx emissions projects subject to CEQA is 65 pounds per day or 0.0325 tons per day. The 0.0325 tons per day threshold can be compared to both the 1.2 ton per day increase in NOx emissions due to biodiesel use estimated by CARB staff for 2014 statewide. Clearly, elimination of the requirements for multimedia evaluation for new fuels sold for LCFS compliance could lead to similar, and therefore significant, unmitigated, increases in NOx emissions or significant and unmitigated increases in emissions of other pollutants.

10. Another way in which new fuels could create potential adverse environmental impacts if the multimedia evaluation requirements are deleted is through the

³ See <http://www.arb.ca.gov/fuels/diesel/aldiesel/20111003biodiesel%20guidance.pdf>

⁴ See Table 1 of <http://www.arb.ca.gov/regact/2015/adf2015/signedadfnotice.pdf>

⁵ See page V-33 of <http://www.arb.ca.gov/regact/2009/lcfs09/lcfsisor1.pdf>

⁶ See <http://airquality.org/ceqa/ceqaguideupdate.shtml>

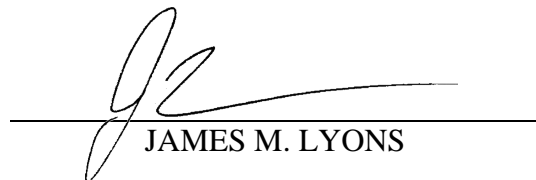
Developmental Engine Fuel Variance Program operated by CDMS.⁷ Again, the multimedia evaluation requirements of H&S §43830.8 that apply to fuels for which CARB adopts specifications would not apply in this case and adverse environmental impacts can occur. Allowing new fuels that are part of this program to be sold for purposes of LCFS compliance without having an approved multimedia evaluation would increase the likelihood that fuel producers would seek to use this program and the likelihood that new fuel that leads to unmitigated adverse environmental impacts would be used in California. These potential environmental impacts that the LCFS regulation could create as a result of the proposed elimination of the multimedia evaluation requirements were not considered in the Environmental Assessment.

11. In addition, the Alternative Diesel Fuel regulation proposed by CARB staff creates another way by which new fuels with potential adverse environmental impacts could be sold in California for purposes of LCFS compliance should the multimedia evaluation requirements be eliminated. Currently, fuels involved in Stage 1 or Stage 2 of the LCFS regulation are not required to have completed a multimedia evaluation and therefore could not be sold for purposes of LCFS compliance until they reach Stage 3, at which point completion of a multimedia evaluation and adoption of fuel specifications by CARB are required. Elimination of the current multimedia evaluation requirements from the LCFS regulation as now proposed by CARB staff, would allow fuels in Stage 1 and Stage 2 to be sold for purposes of LCFS compliance before the potential adverse environmental consequences have been assessed or mitigated. Again, these potential environmental impacts due to the LCFS were not considered in the Environmental Assessment.

12. In summary, retention of the current LCFS requirements that new fuels have received an approved multimedia evaluation pursuant to H&S §43830.8 before being allowed to be sold for purposes of LCFS compliance is the only way to ensure that the LCFS is not responsible for use of these new fuels creating potential adverse environmental impacts.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 19th day of June, 2015 at Sacramento, California.


JAMES M. LYONS

⁷ See <http://www.cdfr.ca.gov/dms/programs/petroleum/DevelopmentalFuels/RelevantLawsInstructionsChecklist.pdf>