

**WSPA Comments on the CARB Draft Advisory on Bio-diesel
Use**
February 2007

General Comments

1. The Advisory does not discuss the difference between various types of bio-diesels and whether it applies to one or all types. ASTM D6751 only covers ester-based bio-diesels, and recommends higher level blends be evaluated on a case-by-case basis. Renewable bio-diesels that do not contain esters are not covered by D6751. We recommend the Advisory clarify that it is applicable to all ester-based and renewable bio-diesels.
2. The Advisory presents information concerning the Department of Measurement Standards regulations for biodiesel. Much of the Advisory is actually dealing with DMS issues around ASTM standards and not fuel criteria related to emissions and their impact on air emission control devices. As such, we believe this Advisory needs to be a joint Advisory from both agencies, or at a minimum include greater guidance on how DMS intends to enforce its standards. For example, how does DMS intend to deal with bio-diesels that do not contain esters?
3. Diesel engines are certified for sale in California for use with CARB diesel. If a vehicle owner/operator chooses to use a fuel that is not a “diesel” and therefore not a CARB diesel, doesn’t that owner/operator violate an ARB regulation? Does the supplier of a B51 or a B100 who supplies that fuel to an owner/operator also violate a regulation? Is that supplier required to notify the owner/operator that it is unlawful to operate CARB certified vehicles with non-CARB diesel?
4. We believe this Advisory contains elements that constitute a regulatory change. Therefore, those elements should be removed, and those provisions that do have the impact of rule should be appropriately adopted as a rule.

Specific Comments:

Background Section

1. We would recommend a section be added entitled ASTM Standards. It would help educate the reader on the issues surrounding the use of bio-diesel. This section needs to discuss the status and plans of ASTM with regard to bio-diesel. For example, the recent updates to D6751 to include an oxygen stability test, the defeat of a B6-B20 proposal, and the decision concerning a proposal to include B5 and below blends in D975.
2. The Advisory references the current definition of “diesel” as “...including any mixture of primarily liquid hydrocarbons – organic compounds consisting exclusively of the elements carbon and hydrogen...” ARB concludes this allows other organic compounds like bio-diesel to be used up to 49 vol%. Organic compounds in CARB diesel do not consist “exclusively” of carbon and hydrogen. Therefore, it is difficult to understand how the definition of “diesel” limits bio-diesel blends to 49%. In addition, since current CARB diesel doesn’t consist of organic compounds that exclusively contain carbon and hydrogen (e.g. sulfur, nitrogen), how can today’s CARB diesel be a “diesel”? (Note – one WSPA commenter indicated we may not be able to argue this point, not should we –comments?)
3. The Advisory states, “Biodiesel blends of B50 or greater are not defined as diesel fuel and the diesel regulations do not apply to these blends.” Since B50 and above blends are not “diesel” they must not be CARB diesel. It is unlawful to blend a CARB diesel with another non-CARB diesel and call it a CARB diesel without recertifying that fuel as meeting applicable CARB diesel specifications. Therefore, the Advisory needs to provide greater direction on what anyone who intends to blend a certified CARB diesel with a non-diesel fuel (e.g. B100, B99) must do.
4. The Advisory says that the finished bio-diesel blends must meet the applicable specifications under Title 13, CCR, Sections 2281 and 2282 and as applicable, any Executive Order issued for a certified diesel fuel formulation. We agree. If a person purchases a certified CARB diesel it is more than likely produced under a confidential

certified formulation. In many cases the fuel could have been commingled with other certified formulations. The biodiesel blender may obtain CARB diesel from more than one supplier using different proprietary formulations. Refiners may import or purchase CARB diesel to supplement their own production which in turn is commingled with their own and then supplied to subsequent customers. Therefore, the producer/blender may have difficulty ensuring the resulting biodiesel blend meets all the applicable parameters of any specific certified alternative formulation and so will CARB. It is also possible the final blend will not meet the 10% aromatic limit. Therefore, we recommend the Advisory provide greater clarity on what a blender must do when producing a bio-diesel blend to ensure it is a compliant fuel.

5. The proprietary certified alternative formulations were based on expensive and time consuming testing on the candidate fuel against a reference fuel. CARB has developed very specific regulations and guidelines for such testing. One requirement is that the candidate fuel must be representative of the fuel that will ultimately be produced by the applicant including the feedstocks and blendstocks. To our knowledge, no certified formulations have been obtained using a bio-diesel blend stock – regardless of the feed used to produce the biodiesel (e.g. soy, tallow, palm oil). As such, it appears none of the current alternative formulations may be appropriate for a bio-diesel blended diesel fuel. If CARB is saying in this Advisory that a bio-diesel blend may be certified using an existing certified formulation that didn't include any bio-diesel in its candidate fuel, we believe this is much more than an interpretation of an existing rule, but in fact a rule change and it must be adopted as such.
6. CARB points out that many of the certified formulations require the resulting fuel to meet D975. Therefore, it follows that any bio-diesel blend using an existing formulation would also need to meet D975. This needs to be clearly stated in the section entitled, "Use of Bio-diesel".
7. Within the "Division of Measurement Standards Regulations" the Advisory discusses the DMS regulations that apply to retail marketing of bio-diesel. The Advisory needs to discuss the problem that DMS standards do not apply to non-retail sales to fleets and other

commercial customers which may represent the majority of diesel used in the state. The Advisory must alert such customers that the fuel they purchase may not be subject to the DMS standards and they should take appropriate steps with their fuel suppliers to provide them with fuel that does meet the DMS standards. We would prefer the Advisory say that bio-diesel blends obtained anywhere in the system should meet D975.

8. The Advisory references the ability of DMS to issue a “developmental engine fuel variance” for bio-diesel blends. The Advisory provides some information on some of the criteria that a fuel provider must meet when applying for a variance. We suggest the DMS needs to provide specific guidance as to how such variances will be regulated and enforced. We have asked DMS to provide us a listing of all such variances for biodiesel and other fuels. A retailer who purchases a bio-diesel blend should know that it was produced under such a variance, in case his retail fuel is inspected by DMS. The fact that CARB included a contact for DMS that no longer works for the agency suggests this Advisory needs to be a joint Advisory, or at a minimum include DMS information.

Use of Biofuels

1. This section starts out by saying CARB staff “recommends that if biodiesel blends are used.....the following conditions should apply”. If this Advisory is to address the voluntary use of bio-diesel under existing regulations it needs to provide clearer and stronger direction than “recommendations”, especially since it is unclear how CARB will use this Advisory in enforcing their regulations. We do not think it is appropriate for CARB to be recommending how someone should comply with or apply DMS regulations. DMS needs to provide their own guidance on those issues. Here again is another reason why this needs to be a joint Advisory.
2. Under “Bio-diesel fuel characteristics” the Advisory needs to direct the reader to use the “**latest**” ASTM D6751 applicable for 15 ppm sulfur content fuel. Here again, this is a DMS matter, not a CARB matter. ASTM has just recently updated its D6751 method to include an oxygen stability test, but DMS does not immediately enforce such

updates until the next NIST Handbook is published - which can be as long as a year after the ASTM standard is adopted.

3. DMS has already adopted a standard requiring the final biodiesel blends to meet D975. If CARB intends to incorporate DMS regulations into its Advisory it needs to include this requirement as well. CARB needs to “recommend” that those purchasing bio-diesel for use in an application not subject to DMS standards require their supplier to meet all the DMS standards as if it were a retail sale.
4. The Advisory allows the use of biodiesel in engines equipped with verified after-treatment devices as long as the device is only verified for PM reductions and does not include a verified NOx reduction. It should be pointed out that those verified devices only certified for a PM reduction were also certified NOT to increase NOx emissions. Even though we may agree with the Advisory on this matter, we question whether this complies with Senate Bill 975 which did not include such a limitation. We believe this is another instance in which the Advisory has gone beyond its stated scope and is a regulatory undertaking. As such, the limitation needs to be removed.

Other Information

1. The Advisory says the bio-diesel portion of the diesel must meet ASTM D6751, contain less than 10% aromatics, and have a cetane number of 53 or more. First, we suggest that a sulfur recommendation of less than 15 ppm should be added to help ensure the final blend meets the sulfur limit. It is unclear why the biodiesel must have a cetane number of greater than 53. Can CARB provide some insight into this requirement?
2. The Advisory recommends against the use of fuel above B20 or B100. Isn't it unlawful for someone to sell, offer for sale or use a fuel that is not a “diesel” in case of a B50+ or a B20+ that does not meet applicable CARB standards or D975 as required by DMS? The Advisory needs to say what is lawful and what is unlawful relative to anyone intending to distribute a diesel fuel that is not certified for use in a California certified engine.

Next Steps

1. CARB has had a long history of collaborative tests with interested parties. In particular, efforts around reformulated gasoline and diesel have been hallmarks of CARB rule development. CARB participation in CRC, NREL and other collaborative test programs has been very helpful. As such, CARB's announced research program on biodiesel seems appropriate. What does not appear appropriate is CARB's plan to proceed with the research without first getting input from the many interested parties. We strongly recommend CARB establish a forum by which the biodiesel research is developed, reviewed and shared.