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Mr. Sam Wade, Branch Chief, Transportation Fuels Branch
Mr. Jim Aguila, Branch Chief, Program Planning & Management Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: 2018 Amendments to the Low Carbon Fuel Standard presented at the August 7th workshop and Concept Paper.

Submitted via email to LCFSworkshop@arb.ca.gov

Crimson Renewable Energy ("Crimson") is the largest in-state producer of biodiesel in California and a provider of ultra-low carbon intensity alternative diesel products to the California market. Crimson has historically produced biodiesel made entirely from used cooking oils, distillers corn oil, and inedible animal fats.

Throughout this comment, references are made to the document "Low Carbon Fuel Standard 2018 Amendments, Pre-Rulemaking Concept Paper," dated July 24, 2017.

Feedstock Supply

Section (IV)(3)(d) Requirements for Verification of Certain Feedstocks states, "verification requires chain-of-custody evidence from the point of origin." This section should be clarified to indicate verification would not require brokers or feedstock aggregators to divulge a list of their feedstock partners as that is typically confidential business information. Divulging that information would lead to a competitive disadvantage, and thus brokers and feedstock aggregators will not disclose original source or origin information to a biodiesel producer. As a result, the LCFS program would be likely to lose critical low-carbon feedstock sources as feedstock suppliers would opt to sell into other markets, for example, animal feed.

Crimson strongly opposes a ISCC UCO feedstock verification program or any program modeled after the ISCC system. The ISCC program would be too burdensome for many smaller feedstock suppliers, which make a large proportion of the U.S. domestic supply of used cooking oil, particularly in California. The net result of such a program would be that the price of an ISCC or similar y program certified UCO would be higher (this is already the case for ISCC certified UCO being shipped from the U.S. to Europe). and the non-certified UCO will simply go to animal feed and other traditional uses at lower price point and would result in feedstock suppliers sending their product out of state to avoid the cost.

There are other approaches to validate such feedstocks. The EPA's RFS program uses the Separated Food Waste Plan (SFWP) to identify suppliers of select feedstocks. The SFWP requires that suppliers

identify the geographical area (at the metropolitan area or county level) from where the material is originating from and allows for statement from suppliers to assure authenticity of the information provided and compliance with the program.

Additionally, it possible for a third-party auditor to verify that used cooking oil feedstocks was used as opposed to virgin vegetable oils. When utilizing UCO feedstocks, the biodiesel production process will entail the use of an acid catalyst or some other means to convert free fatty acids into esters (i.e. heterogeneous catalyst used in combination with very high temperature and pressure. There are also other hallmarks of UCO-based biodiesel production such as lower glycerin quality and reduced yields compared to using a virgin vegetable oil. Onsite audits should include sampling each feedstock storage tank and testing the sample for fatty acid profile, polymerized glyceride content, and sulfur content. UCO feedstock will have slightly different fatty acid profile and have higher levels of polymerized glycerides and sulfur.

Lastly, for feedstock transportation distances, ARB staff have previously recommended that producers use a feedstock transportation distance that is conservative such as a distance that would be greater than actual transport distances for the majority of the volume. Producers who have done this have typically gotten slightly higher CI than they would have but followed ARB's advice because this would be easier to administer and demonstrate compliance. Having to calculate and track a monthly volume weight average feedstock transport distance is very burdensome and costly. We would like to work with other industry stakeholders (feedstock suppliers and other biofuel producers) to come up with a more reasonable approach to verifying feedstock transport distances.

Ongoing Verification

Section (IV)(3)(e) Material Misstatement Definition by Data Type, bullet point "CI and Fuel Quantities by FPC by Quarter" appears to indicate that the 5% material misstatement threshold is determined on a quarterly basis. If this interpretation is correct, then the evaluation period may be unreasonably short compared to the initial validation period of two years. For example, a spike in energy use within one month of a two-year evaluation period is only 1/24th of the values used to generate the average CI. This same energy spike in terms of energy unit (therms or kwh) per unit of biodiesel could happen over a quarter due to implementation of new equipment and systems. A quarter of higher than normal energy or chemical usage would as 1/8th of the 2-year values used to generate the comparison average CI, and thereby the variation that was acceptable to generate the initial CI would cause a material misstatement in the much shorter verification period. Due to the fluid nature of production parameters such as yield, unit level energy and chemical use over the course of a quarter or even 6 months as opposed to 2 years, invalidation of the credits generated by legitimate producers would be unfair and unreasonable. Additionally, we must all be cognizant of the potential market chilling that could occur if obligated parties fear invalidation of credits and step away from buying LCFS credits, leading to rapid and sustained price drops (similar to the RIN fraud in 2012).

Mass Balancing Abuse

Foreign pathways have the potential for taking advantage of improper mass balancing. For example, a producer could make 1 million gallons of biodiesel: 400,000 gallons from UCO, and 600,000 gallons from Palm Oil. The producer uses the mass balance system to qualify the production from UCO into

California, Canada, and the EU claiming 400,000 gallons of UCO-based biodiesel to California 300,000 gallons to Canada and 300,000 gallons to the EU. To each jurisdiction, everything looks to be in compliance when a broader view would show it is not. In cases where some portion of the producer's feedstock is palm oil based, a more comprehensive approach must be used to enable accurate verification. ARB should endeavor to coordinate verification across other LCFS jurisdictions such as Oregon, British Columbia and starting in 2019 Canada.

Export Abuse

Similar to the abuse potential in the mass balancing approach, exported volume calculations may be abused to the detriment of the LCFS program when credits are not retired as required. The LCFS Reporting Tool (LRT) does not follow the chain of custody of the fuel itself, but rather, just follows the CI credits. For example, the producer sells 7000 gallons of biodiesel with obligation to a trader. The seller and trader report in LRT matches and the transaction balances. The trader sells the CI credits to an obligated party, both file in LRT, and the transaction balances. The trader then sells 7000 gallons of biodiesel to a blender without obligation, but does not report that sale in LRT. The blender transports the fuel out of state. Without that transaction in the LRT no deficit of CI credits was created. In tandem with the CBA, our recommendation is that the LRT system be enhanced to require a balancing transaction for the physical product in addition to the CI credits. This should further safeguard the system from bad actors. Note that the ADF reporting team already gathers chain of custody information through the ADF Reporting Form that can be used for this purpose.

On-Site Visits and Verification Auditors

We are especially concerned about the increased potential for (i) fraud and misrepresentation of CI scores, and (ii) labeling disallowed feedstocks as approved feedstock pathways (i.e. a producer using Palm Fatty Distillates / PFAD and exporting this to California under a UCO pathway.). We believe that the potential for abuse is significantly higher for foreign producers compared to U.S. producers. Being outside U.S. jurisdiction combined with the difficulty of enforcing U.S. civil and criminal penalties in many countries means that foreign producers have less reason to fear negative consequences if they are caught cheating. Therefore, the deterrent value of any civil and criminal penalties is reduced for foreign producers.

For these reasons, we believe that it is critical that LCFS verification auditors must be U.S. based companies and as a result subject to U.S. laws and regulations. Without the producer and their verification auditor in some way beholden to U.S. law, foreign producers would have the potential for gaming the system. The potential for collusion between a foreign producer and foreign auditor is also higher compared to when a U.S.-based auditor is auditing a foreign producer.

ARB should not approve a foreign pathway if it does not have the resources to conduct on-site verification audits or require a third-party verification audit by U.S. auditor.

Crimson completely supports the requirement for on-site verification audits, provided these are conducted by U.S.-based auditors. On site visits are an important part of any verification program. We would like to suggest that onsite verification audits be random, unannounced visits (or at least, visits that are announced with very short notice such as within 24 hours), provided such visits are applied



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at least equally to domestic and foreign producers. On-site verification audits scheduled weeks or months in advance simply give a fraudulent producer too much time to try to cover their tracks.

Carbon Intensity: Initial and Ongoing

It is important the carbon intensity reductions not be left on the table due to an overly-burdensome “worst-case scenario” assumption. In tandem with the California Biodiesel Alliance we support the following approach. After initial validation, the producer is free to use the applicable CI for up to one year. The next year, the producer would be required to update their CI calculation using data approved via Third Party Verification. If the CI is lower, no action would be taken except that the producer would use the lower CI score for the following year. If the CI has been exceeded by 10% or less, the producer would be assessed a deficit equal to the over-generation. No further penalty would be assessed against the producer. This would encourage participants to lower their CI every year, allowing the program to generate the maximum number of valid credits as possible. We agree with CBA this is much better than encouraging the “worst case scenario” where the LCFS program suffers because valid credits went un-generated.

Should there be any questions, please free to contact me at (720)-475-5409 or hsimpson@crimsonrenewable.com

Sincerely,
Harry Simpson
President
Crimson Renewable Energy

