Western States Petroleum Association
Credible Solutions • Responsive Service • Since 1907

Catherine Reheis-Boyd
President

April 23, 2018

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA comments on ARB's Proposed Low Carbon Fuel Standard Regulation Amendments

Clerk of the Board:

The Western States Petroleum Association (WSPA) appreciates this opportunity to provide comments to the Air Resources Board (ARB) Proposed Low Carbon Fuel Standard (LCFS) Regulation Amendments. WSPA is a non-profit trade association representing companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and four other western states.

§ 95481 - Definitions and Acronyms

In § 95481(a)(7), the draft regulation proposes in the definition for animal fat that "Yellow grease" must be reported under an applicable animal fat pathway if evidence is not provided to the verifier or CARB to confirm that it is solely used cooking oil. WSPA recommends that CARB consider the inclusion of pro-rating animal fat and used cooking oil as an option. By replacing "…that it is solely used cooking oil." with "…the ratio of animal fat to used cooking oil within the yellow grease in order to pro-rate the carbon intensity."

In § 95481(a)(13), WSPA recommends that, in the definition of biogas, the additional language "includes but not limited to" be added when describing potential sources from which biogas may be derived.

In § 95481(a)(18), the proposed change to the definition for "Biomass-based Diesel" does not address the problem indicated in the ISOR. The concern is that an entire volume of co-processed fuel might be considered Biomass-based Diesel under the current definition. However, simply adding that the renewable content must be more than 5% of the total diesel volume does not correct this. In the context that the term "Biomass-based Diesel" is used in the regulation, it would be better to amend the definition as follows:

> "Biomass-based Diesel" means a biodiesel (mono-alkyl ester) or a renewable diesel that complies with ASTM-D975-14a (2014), *Specification for Diesel Fuel Oils*, which is incorporated herein by reference. This includes <u>the renewable portion of</u> a renewable fuel derived from co-processing biomass with a petroleum feedstock.

Further, WSPA requests that, in the definition of bio-mass-based diesel, new language be removed from the definition, removal of this new language would allow co-processors with 5% or less renewable diesel

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org

use of a temporary pathway code with a CI of 65 gCO2e/MJ for feedstock derived from plant oils, excluding palm oil and a CI of 45 gCO2e/MJ for Fats/Oils/Grease Residues as specified in Table 8.

In § 95481(a)(61), WSPA requests that ARB verify the year referenced for Senate Bill 43, as SB 43 of 2016 relates to health care coverage.

§ 95482 - Fuels Subject to Regulation

WSPA supports the inclusion of Alternative Jet Fuel (AJF) under the opt-in provision, while retaining the exemption status for conventional jet fuel. Likewise, WSPA supports the exemption of any deficit-generating fuel for military end use while removing military applications from end use exempt status.

WSPA also supports the setting the point of obligation at the airport storage facility. This is a reasonable measure for demonstrating that the fuel was supplied to aircraft in California, without requiring reporting parties to demonstrate delivery to the aircraft themselves. We assume that, in the case of renewable jet fuel produced by co-processing renewable feedstocks in refineries, the point of credit generation will be the refinery gate. This renewable jet will not be segregated from petroleum jet as it leaves the refinery, making it impossible to track it to the airport storage facility. ARB should make this clear in the final rulemaking.

§ 95483(a)(3) - Transfer Period

§ 95483 (a)(3) states that: *"For all liquid fuels, the period in which credit or deficit generator status can be transferred to another entity, for a given amount of fuel, is limited to two calendar quarters.*" WSPA requests that ARB verify that the term "calendar quarters" does not mean a specific calendar year but rather the calendar quarter which the title is received and subsequent calendar quarter, regardless of overlap into a new calendar year (i.e., a title received in the fourth quarter of one year can change status through the first quarter of the next year).

§ 95484 - Annual Carbon Intensity Requirements

WSPA is encouraged the proposed changes to the 2019 and 2020 compliance benchmarks in § 95484, Tables 1 and 2, reflecting stakeholder feedback. However, analysis of available fuels and potential credit generation suggest that these standards are still too aggressive and can result in widespread deficits. The proposed 7.5% carbon intensity reduction will likely be challenging for 2020 and there remains a risk of a deficit balance existing for the industry going into the next decade. The 2030 target of a 20% carbon intensity reduction is very aggressive.

Thus, there remain system-wide constraints, at least in the short-term that make these near term standards too aggressive. These constraints include lack of low CI fuel availability (cellulosic and advanced biofuels have not developed) and time required to grow electricity fuel infrastructure and demand. It is imperative that ongoing program assessments be conducted, so that appropriate adjustments to the standard can be made in a timely manner should analysis warrant such a change. WSPA recognizes that there will be opportunities to assess progress toward that goal. We encourage ARB staff to maintain their existing progress reporting to the public and the open dialogue with stakeholders that has occurred over the life of the program.

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org

§ 95486 - Generating and Calculating Credits and Deficits

WSPA does not agree with ARB's assertion that current regulations prohibit corrections to prior reporting periods and objects to the proposed changes to write this interpretation into the regulations. Corrections to reports are not necessarily a sign of wrongdoing or violating regulatory requirements. Adjustments to transaction records are a normal part of doing business and reporting parties should not be penalized for wanting these adjustments reflected in their compliance reports. Even where such corrections are the result of recordkeeping or reporting error, it is unreasonable to withhold the full value of the corrections as an automatic penalty as it goes beyond normal enforcement discretion and can mean a significant financial impact for perfectly reasonable errors or oversights.

In § 95486(a)(1)(B), a provision has been added whereby credits will not be issued if a credit generator has not fully reconciled the relevant transaction reporting with their business partners. WSPA supports and appreciates the formal report reconciliation process. It improves the accuracy of reporting and the overall stability of the program. However, we believe this proposed provision is overly punitive in that there is no recourse provided for a reconciliation effort that goes beyond a quarterly reporting deadline. This provision would allow a reporting entity to avoid transferring credits or accepting deficits by simply reporting an amount that is one gallon different from their business partner.

In that situation, ARB proposes to simply invalidate all transfers of a given pathway between the two business partners, regardless of which party reported correctly. ARB's stated position is that the wronged party in this situation would have legal recourse to correct the situation outside of LCFS reporting. That is an extreme solution to what may be a minor disagreement. We urge ARB to improve this provision by allowing partial transfers of credits and deficits to exclude only the difference between the reported volumes, establish a materiality threshold for reconciliation differences, and allow for prior-period corrections to be made once a reconciliation dispute is resolved.

§ 95487 - Credit Transactions

In § 95487(c)(1)(C), WSPA requests that ARB allow for 5 <u>business</u> days for the Seller to post the Credit Transfer Form.

§ 95488.3 - Calculation of Fuel Pathway Carbon Intensities.

In § 95488.3(b), the Tier 1 calculators should reference March 6, 2018, rather than March 6, 2017.

§ 95488.8 - Fuel Pathway Application Requirements Applying to All Classifications

In § 95488.8(i), ARB proposes a method whereby a pathway applicant may use book-and-claim accounting to allocate low-CI electricity production to their electricity or hydrogen pathway, provided certain conditions are met. We propose a similar provision would benefit the program under § 95489(c), Credits for Producing Crudes using Innovative Methods and § 95489(e), Refinery Investment Credit Pilot Program.

The program currently allows crude production facilities and refineries to generate credits for renewable electricity produced and consumed by the facility. In some circumstances, it may make operational sense to direct renewable electricity produced on site to the grid and consume electricity from the grid. WSPA proposes that ARB incorporate the book-and-claim accounting option for renewable electricity in the rules for innovative crude credits and for refinery investment credits.

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org

Similar to refinery investment credit projects, we believe there are several additional technology and efficiency options that should be added to the innovative crude section, including:

- Improvements in process efficiency including advanced control systems, digitalization, etc.
- Improvements in equipment energy efficiency, including facility upgrades/retrofits and use of new technology.
- Improvements in reservoir management that lead to reductions in steam-to-oil ratios or EOR intensity, resulting in energy and GHG savings.
- Credit for solar PV exports to the grid to offset own-use power at night.
- Use of energy storage to enable greater onsite renewable energy penetration.

§ 95489(c) - Credits for Producing Crudes *and Transporting* using Innovative Methods

Pursuant to § 95489(c), the LCFS regulations currently allow for LCFS credits from innovative crude oil production and recovery. WSPA recommends expanding the existing regulations to include innovative crude oil transportation technologies. To accomplish this, we propose adding "transport (or transporter or transportation)" to the existing "Innovative Crude Production" provisions. Example changes are proposed as follows:

> "§95489(c) Credits for Producing ***and Transporting*** Crudes using Innovative Methods. A crude oil producer, ***transporter*** or refinery receiving the crude may generate credits for crude oil that has been produced ***or transported*** using innovative methods and delivered to California refineries for processing."
>
> "§95489(c)(1)(A) For the purpose of this section, an innovative method means crude production ***or transport*** using one or more of the following technologies:
> …
>
> 3. …electricity must be produced and consumed onsite or be provided directly to the crude oil production ***or transport*** facilities from a third-party generator and not through a utility owned transmission or distribution network."

§ 95488.9 - Special Circumstances for Fuel Pathway Applications

In § 95488.9(b), temporary CI's have been increased by an additional 5% above the most recent, most conservative pathway certified with that feedstock. WSPA requests that a rationale for adding an additional 5% to the most conservative fuel pathway certified with that feedstock-fuel combination be provided as the additional 5% appears to be overly punitive.

§ 95491 - Fuel Transactions and Compliance Reporting

In § 95491(h), WSPA requests that the word "quarterly" be replaced with the word "annual", as LCFS quarterly reports are "progress" reports and the compliance must be demonstrated over an annual period.

§ 95491.1 - Recordkeeping and Auditing

In § 95491.1(a), WSPA requests that the ARB retain the retention period of 5 years, instead of the proposed 10 years.

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org

§ 95500 - Requirements for Validation of Fuel Pathway Applications; and Verification of Annual Fuel Pathway Reports, Quarterly Fuel Transactions

In § 95500(b)(2)(A), the section states that verification will be done annually. WSPA recommends ARB looks at providing options to reduce the burden. Holders of site-specific certified fuel pathways are also subject to USEPA regulations under the Renewable Fuels Standard, which requires a third-party engineering review ever 3 years. One option to reduce the LCFS verification administrative burden would be to allow these facilities to be on the same triennial schedule, and utilize the data and outcome of the USEPA verification in the LCFS verification process. Another option might be to allow a less frequent verification requirement for facilities that receive a positive verification statement in their initial verification.

Appendix C: CA-GREET 3.0 Technical Support Documentation and CA-GREET 3.0 Excel File

In the CA-GREET 3.0 Lookup Table Pathways – Technical Support Documentation Section A (CARBOB) and Section B (ULSD), WSPA requests that ARB provide the supporting information for refining capacity, including downstream units, used in the Argonne National Lab (ANL) Linear Programming model to represent California refineries.

The refining efficiency of CARBOB is lower than those in GREET 2016 (as well as GREET 2017). ANL-GREET's value is 88.74% while CA-GREET 3.0's value is 88.64%. WSPA requests that ARB provide rationale for the difference.

ANL included CA ULSD in its GREET 2017. The efficiency of CA ULSD in CA-GREET 3.0 is lower than those in GREET 2017. ANL-GREET's value is 85.98% while CA-GREET 3.0's value is 85.87%. WSPA requests that ARB provide rationale for the difference.

For FCC coke combustion in the petroleum tab of GREET2016, ANL used the emission factors of petcoke (101.64 g CO_2e/MJ). In ANL-GREET 2017, ANL added the emission factors of FCC coke combustion (96.21 g CO_2e/MJ). It is recommended that ARB use the newly added emission factors of FCC coke combustion.

While CA-GREET2.0 uses USEPA's eGrid as a source of electricity mix for both stationary and transportation uses, CA-GREET3.0 uses the eGrid as a source of mix for the stationary uses and the California Energy Commission report as a source of electricity mix for transportation uses. WSPA requests that ARB provide the justification of the change and the rationale to use different mixes for stationary and transportation uses. As mentioned in the same document, determining a marginal mix is highly speculative.

Table A.5 compares the CARBOB's CI between CA-GREET2.0 and CA-GREET3.0. The efficiency changes from 89.00% to 88.64%. With 89.00% efficiency, the energy loss to produce 1MJ of gasoline is 0.1236 MJ (=1/0.89-1). Similarly, with 88.64% efficiency, the energy loss to produce 1 MJ of gasoline is 0.1282 MJ (=1/0.8864 – 1). So, the energy loss increases by 3.7%. On the other hand, the CI of refining increases 13.45 to 14.92 g CO_2e/MJ by 10.9%. Unless there are major changes in process fuel shares, the changes in CI follow the changes in energy loss. WSPA requests that ARB provide the explanation for the larger CI changes relative to the energy loss changes.

In addition, it is requested that ARB provide a calibration verification showing how the share of energy inputs in Tables A.5 for CARBOB refining and B.4 for ULSD refining correlates with the fuel use data

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org

published by the Energy Information Administration (EIA). Further, the source of the purchased hydrogen data should be cited in the document.

In the CA-GREET 2.0 model, an applicant can create user defined Tier 2 pathways in various tabs (such as EtOH and BioOil). The user defined Tier 2 pathway section has been eliminated in the proposed version of the CA-GREET 3.0 model. WSPA requests that ARB provide an updated CA-GREET 3.0 spreadsheet model enabling user defined Tier 2 pathways without having applicants overwrite existing cells in the model.

Under the "Fuel_Specs" tab, the sulfur content in conventional diesel and California diesel should not exceed 15 ppm post-2005. The model shows 200 ppm and 120 ppm respectively. It is requested that the document be revised to correct the specifications and report impact to CI values, if any.

WSPA looks forward to ARB's responses to our comments. If you have any questions, please contact me at this office, or Tom Umenhofer of my staff at (805) 701-9142 or via email at tom@wspa.org.

Sincerely,

cc: Tom Umenhofer - WSPA

1415 L Street, Suite 900, Sacramento, California 95814
(916) 498-7752 ▪ Fax: (916) 444-5745 ▪ Cell: (916) 835-0450
cathy@wspa.org ▪ www.wspa.org