Cheryl Laskowski, Ph.D.

California Air Resources Board (CARB)

1001 I Street

Sacramento, CA 95814

March 15, 2023

Dear Dr. Laskowski:

Nacero, Inc., a developer of large-scale facilities that will make sustainable aviation fuel (SAF) and low-carbon aviation fuel (LCAF) from natural gas and renewable natural gas (RNG), appreciates this opportunity to comment on the proposed amendments to CARB’s LCFS regulations. While we are not a California based company, we applaud California and CARB’s leadership in the energy transition particularly in the area of market support and stabilization in the fuels space. It is in this spirit that Nacero has decided to comment on the proposed LCFS regulations.

As you are aware, aviation is responsible for 11% of US transportation sector greenhouse gas emissions but is not a near-term candidate for decarbonization through electrification or the use of hydrogen. The SAF Grand Challenge calls for the production of 3 billion gallons per year of sustainable aviation fuel by 2030 and 35 billion gallons per year by 2050. These goals will be difficult, if not impossible, to achieve without a plentiful new feedstock and a large-scale means of processing it.

Biogas that has been captured and cleaned to natural gas pipeline specifications (renewable natural gas or RNG) can make a material contribution. Because it is natural gas pipeline compatible, RNG produced at farms, landfills and water treatment plants can supply large-scale, cost-effective, centralized production facilities like our flagship facility in Texas that has the potential to produce 900 million gallons of SAF/LCAF per year. The benefits that would come from SAF/LCAF utilizing natural gas and RNG (on a book and claim basis) are:

* Over ~50% lifecycle CO2 reduction versus existing processes producing jet fuel;
* Ability to produce SAF/LCAF at significant scale, which can be delivered through traditional pipeline infrastructure;
* Underlying technology is presently pending ASTM’s Fast Track process of approval for Tier I and Tier II certification;
* Ability to produce a lower carbon aviation fuel at prices comparable to current jet fuel;
* Nacero’s SAF/LCAF is blendable up to the federal regulatory limit of 50% and we are seeking ASTM certification as a fully drop-in fuel; thus, these products do not require changes to the existing fleet of commercial airplanes.

These improvements to traditional jet fuel would go a long way in supporting both California and the nation’s targeted reductions in greenhouse gas emissions. However, Nacero has concerns regarding the proposed regulatory amendment found in Section 95488.8(i)(B) of the LCFS related to deliverability requirements for indirect accounting of biomethane. This proposed change targets deliverability requirements for “transportation fuel” which, although it appears to be focused on cars, light and heavy duty vehicles, and other more readily abatable forms of transportation and not the aviation industry, can be read to apply to the aviation industry as well pursuant to Title 17, Section 95482. Nacero is seeking clarification that the changes proposed to Section 95488.8(i)(B) would not capture aviation fuel. If there is an intent to capture aviation fuel within the scope of this language, given the broadly used term of “transportation fuel”, we propose that RNG used to produce aviation fuel be afforded the same treatment as biomethane used to produce hydrogen given the difficulties associated with abating greenhouse gases from the aviation sector.

If in fact lower carbon aviation fuels are captured by the proposed changes to Section 95488.8(i)(B), then it will become significantly more difficult to reduce the CI score of such fuels. While we are supportive of California RNG producers, it must be realized that we will need as much RNG as possible from within and outside of California to abate difficult sectors. It simply does not benefit California or the rest of the nation to implement such a requirement.

In conclusion, in his July 2022 letter to CARB, Governor Newsome identified the need to reduce dependence on oil in sectors that are directly regulated by the Federal Government. In this letter, he expressly mentioned the aviation industry as one such sector and has sought an aggressive clean fuel target in the aviation sector (a request which CARB is now addressing). We sincerely believe that our product will address this request and will provide a cleaner transition away from oil-based jet fuel in a sensible and pragmatic manner. Therefore, we ask CARB for clarity in regard to its proposed regulatory changes to Section 95488.8(i)(B) of the LCFS as well as its continued support and leadership.

Thank you,

Phillip B. Feiner

General Counsel