September 29, 2021

California Air Resources Board
Low Carbon Fuel Standard
1001 I Street
Sacramento, CA 95814

Re: CalBioGas Kern LLC Tier 2 Pathway Application No. B0185; Response to Animal Legal Defense Fund

California Bioenergy LLC ("CalBio") writes on behalf of CalBioGas West Visalia LLC ("the project") to provide responses to the comments received in a letter dated September 28, 2021 regarding the Tier 2 Pathway Application (No. B0185) for compressed natural gas (CNG) from dairy manure at ABEC #8 LLC dba S&S Dairy Biogas, ABEC #9 LLC dba Moonlight Dairy Biogas, ABEC #15 LLC dba Hamstra Dairy Biogas in Tulare, California for use as transportation fuel in California. CalBio is responding within the scope of the Low Carbon Fuel Standard ("LCFS") program per § 95488.7(d)(5)(A), which requires responses to comments "related to potential factual or methodological errors."

CalBio appreciates the comments and is committed to full and accurate accounting of life cycle emissions associated with the pathway application. CalBio commends the California Air Resources Board ("CARB") in its development of the Livestock Compliance Offset Protocol ("Protocol") and Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure ("CI Calculator"), which have been vetted through public processes to ensure greenhouse gas ("GHG") emission reductions are achieved beyond a business-as-usual baseline.

The Animal Legal Defense Fund ("Commenters") who submitted comments contends that the application should be rejected as summarized below. As outlined in CalBio's subsequent responses to each comment, CalBio does not believe these claims to be accurate and has developed the project entirely within the framework established by CARB to develop low carbon fuels in the transportation sector. In addition to reducing GHGs, this project generates renewable natural gas that displaces use of fossil-based fuels, improves local air and water quality, and creates local job opportunities.

(1) Important factual information is omitted or redacted in the application, rendering meaningful stakeholder review of its claims impossible.

CalBio provided all information required by the LCFS regulation in its full unredacted pathway application to CARB. All redacted information in the publicly posted application package

contains competitive trade secret information and is considered Confidential Business Information, which is protected from public disclosure under California Government Code 6254.7. For additional transparency, CalBio has reduced redactions in the LCA report associated with the pathway and provided to CARB staff. CARB Staff reviewed the submission package and deemed the application complete. CalBio subsequently engaged with an independent, third-party, CARB-accredited verification body to perform a validation, which included a site visit and review of all site-specific inputs used to determine a carbon intensity ("CI") score. The verification body conducted a conflict-of-interest review that was reviewed by CARB to ensure impartiality in the validation process.

Following a successful validation and submission of the validation statement, CARB then performed an engineering review, which includes an evaluation of inputs into the CA-GREET 3.0 model and replication of the CI calculations. The CARB Staff Summary provides information provided in CalBio's application, including the approximate number of animals on the farm, manure collection rates and utilization, as well as details on mechanical separation, lagoon cleanout frequency, and the biogas conditioning system.

(2) The application violates the LCFS regulation by failing to employ a methodologically sound life cycle analysis that accounts for the GHG emissions that result from the applicant's production of manure methane.

This statement is incorrect. The project's pathway application utilizes the exact methodology and calculators designed for use under the LCFS regulation. The life cycle analysis for this pathway application was conducted using a modified version of the Board-approved Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure, which is incorporated by reference in the LCFS regulation, § 95488.3(b). As noted in the CARB Staff Summary, "the modified calculator has been determined to be equivalent or superior to CA-GREET3.0 as per section 95488.3(a)".

The purpose of the LCFS pathway application is to calculate the methane emissions that would have occurred in the absence of the digester project. The life cycle emissions are calculated using the GHG assessment boundary defined in Chapter 4 of the Compliance Livestock Offset Protocol, which delineates the Sinks, Sources, and Reservoirs ("SSRs") that must be included or excluded when quantifying the net change in emissions associated with the installation and operation of a dairy digester. The life cycle analysis includes an assessment of the baseline manure management practices at the dairies and because methane emissions from dairy operations are not regulated, reductions from these facilities exceed regulatory requirements and are therefore additional.

(3) CAFOs spur climate change, degrade air quality and water quality, and harm human health.

The Commenters provide criticisms on the existence of CAFOs generally, however none of the comments pertain to the application directly nor are they related to factual or methodological errors. The purpose of the LCFS program is not to enforce laws regulating CAFOs but instead it is designed to decrease the carbon intensity of California's transportation fuel pool and provide

an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits. In addition to complying with all local, state, and federal environmental regulations and permits, these projects help to achieve that by capturing fugitive GHG from anaerobic manure lagoons which would have otherwise been released to the atmosphere. The project captures and thereby substantially mitigates emissions of methane gas produced in the pre-project anerobic lagoon—a harmful greenhouse gas with a global warming potential 25 times greater than carbon dioxide. The biomethane is then used to generate renewable natural gas which is utilized in heavy-duty natural gas vehicles in California. This has the benefit of improving local and regional air quality through the displacement of petroleum-based fuel consumption and reduces emissions from the diesel fleet in California.

In addition to capturing and destroying GHGs, the project also provides additional local and regional benefits by reducing NOx, PM, SOx, and VOCs according to the Dairy Digester Emission Matrix[1] for digesters utilizing its gas for Pipeline Injection to Natural Gas Vehicles. H_2S emissions are also reduced on the dairy through the capture and onsite removal and processing before being sent for upgrading and injection into the natural gas distribution system.

Furthermore, the double-lined covered lagoon digester installed in this project, which was permitted by the Regional Water Board, helps dairies protect groundwater resources in several ways, including through implementation of best practices for leak detection and monitoring and leachate collection and removal. The post-digested effluent also converts nutrients into a more usable form for crops, thus reducing demand for synthetic fertilizer. Therefore, digesters help prevent groundwater contamination and are an improvement relative to common practices in the region where manure is stored in earthen, unlined lagoons and subsequently applied to the surrounding cropland.

(4) Granting the application would further incentivize the proliferation and expansion of CAFOs and industrial animal agriculture, exacerbating the associated significant environmental effects in violation of the 2006 California Global Warming Solutions Act.

Dairies exist to produce widely consumed goods such as milk, butter, yogurt, ice cream, etc. and herds are managed based in response for demand for their products, not for gas production. Additionally, CAFOs are not illegal and are not discussed in the 2006 California Global Warming Solutions Act. As discussed elsewhere, the project has significant environmental benefits relative to a business-as-usual scenario. CAFOs have existed in California for decades and the consolidation of herds to facilities with digesters should be encouraged in order to best make use of the infrastructure in place and maximize the benefits to the public.

(5) Methane digesters are false solutions to the significant environmental effects inherent in industrial animal agriculture.

The Commenters claim that "methane digesters are ineffective, inefficient, and dirty energy sources, much like the fossil fuels the LCFS regulation seeks to displace." This is wholly

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[1] https://ww2.arb.ca.gov/sites/default/files/2020-07/dairy-emissions-matrix-113018.pdf

inaccurate and there is no evidence to support this assertion. Dairy digesters are remarkably effective at reducing methane beyond the business-as-usual scenario and while they are not the only solution, they must be part of the solution for achieving environmental sustainability in the agriculture industry if catastrophic climate change is to be avoided. The lifecycle analysis prepared using the CA-GREET 3.0 and reviewed by CARB and an independent third-party verifier confirms that real, quantifiable, permanent, and additional have occurred.

CalBio is appreciative of the opportunity to respond to these comments and discuss our LCFS pathway applications and the integrity of the LCFS program. We are confident our application fully complies with the requirements of the LCFS program and respectfully request CARB proceed with the certification of the pathway. CalBio is prepared to respond to any further input or inquiry from CARB should it be necessary.

Sincerely,

Andrew Craig
Vice President, Greenhouse Gas Operations