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September 24, 2024

Liane M. Randolph, Chair

California Air Resources Board

Low Carbon Fuel Standard

1001 I St #2828,

Sacramento, CA 95814

Re: Tier 2 Pathway Application No. B0603; Response to M. Stewart Salem ("Commenter").

Dear Chair Randolph:

Maas Energy Works, LLC on behalf of Greengasco, LLC ("Pathway Applicant") is responding within the scope of the Low Carbon Fuel Standard ("LCFS") program §95488.7(d)(5)(A) to the commenter, M. Stewart Salem, ("Commenter"), in a letter submitted September 20, 2024, regarding the Tier 2 Pathway Application (B0603) (the "Application").

Regulation §95488.7(d)(5)(A) states, "Only comments pertaining to potential factual or methodological errors will require responses from the fuel pathway applicant," We have carefully reviewed the public comments received on the Application and have determined that they do not pertain to factual or methodological errors.

However, the Pathway Applicant will respond to the remarks made by the Commenter below. Furthermore, we believe that after the California Air Resource Board ("CARB") has sufficiently reviewed our response, there is no need to make any changes to our pending application.

The commenter states:

> ***"…Tier 2 Pathways that claim methane abatement on greenfield and dry lot or solid storage baseline dairies that [sic] conflict with CARB's established guidance and the requirements."***

This comment incorrectly states that this digester is a greenfield project--or perhaps states that it is a project whose manure was handled via dry lot or solids storage in the baseline. None of these statements are true. The publicly available application package, which includes the Life Cycle Analysis (LCA) and CARB Staff Summary, states that Hartley Farms completed construction in 2016 and used Anaerobic Lagoons for its baseline manure storage practice. The digester is thus not applying as a greenfield project nor applying with a dry lot or solid storage baseline. Rather the application's baseline is based off of dairy specific data for pre-existing manure management practices. The approved CA-GREET 3.0 model considers all emissions within the system boundaries based on current LCFS regulations. The accuracy of the project boundaries, the CA-GREET3.0 model, and all inputs have been reviewed by CARB and verified by an independent verifier. The third-party verifier also visited the location to confirm that all emissions were reported accurately and in accordance with LCFS guidelines.

The commenter states at length:

> ***"LCFS measures the emissions reductions of a given dairy digester facility by comparing the baseline emissions prior to the digester operation against the project's emissions subsequent to operation of the digester. In the case of newly-constructed, or "greenfield," dairy, CARB has guided applicants to review the emissions baseline for that dairy herd while assuming dairy manure handling practices that predominate in the State to discourage developers from constructing new, high methane emitting dairy projects that claim significant methane mitigation benefits for abating these previously non-existent, methane emissions. California air and water permit regulations requires new dairy projects to construct and install emission***

mitigation technologies to address their methane footprint. Consequently, these new California dairy projects are ineligible to receive the benefits of LCFS because there is no "additionality" in building a new high -emitting facility; Tier 2 Pathways must reduce emissions from the status quo ante. Dairies located in other states, however, are seemingly (according to the discordance between CARB's guidance and approved Tier 2 Pathways) not necessarily subject to this stricture. In order to address this disparate treatment, CARB has required projects use manure management practices that predominate in the project's home state when determining the baseline emissions for a greenfield, dairy digester project. This guidance references the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks:

1990-2022 – Annexes (a copy of this table is attached hereto as Exhibit A.

CARB's guidance has provided historical certainty, ensuring true global warming benefits are realized and rewards retrofitting polluting dairies with digesters that has been seemingly undermined by recent approved Tier 2 Pathway applications. It has been helpful and instrumental in guiding dairies' assessing the viability of obtaining a Tier 2 Pathway and participating in LCFS. However, the Application has been conveniently timed with respect to the new dairy to demonstrate methane abatement on paper when it should reference the dairy's EPA-documented solid storage and dry lot baseline..."

This comment inaccurately suggests that this is a new dairy, whose digester is applying to the LCFS program as a greenfield project. As described in the immediately preceding section, neither of these are true. The facility is an existing dairy with baseline emissions already established from pre-existing manure operations. Putting aside whether the commenter's arguments on CARB guidance regarding treating of greenfield baselines are accurate, the discussion of greenfield's does not apply to this application. Since these dairy emissions existed years before the installation of the dairy digester, they were not produced by or on behalf of the project. Dairy manure was effectively redirected from lagoons to the new anaerobic digester, where methane is extracted, cleaned, and used as fuel for vehicles. In accordance with the LCFS program's regulations, this process produces credits by reducing methane emissions from the baseline case.

"The Application is for a dairy digester project sited in Texas. Texas, according to the EPA data referenced by CARB, is a predominantly low-methane emitting dairy jurisdiction as more than half of all dairies use solid storage (41%) or dry lot (10%); 58% of all Texas dairies have low methane baselines when accounting for dairies that do not have anaerobic digesters.

Google Earth imagery shows the Facility commenced construction in 2011 (images attached as Exhibit B) and has been continuously in construction in various phases through completion of the digesters and the dairy's final interconnection to a biogas gathering line. Notwithstanding the inconsistencies in the dates of the imagery and the dates cited in the Application, these satellite pictures indicate the Facility's greenfield status and the baseline claimed in the Application is inconsistent with the pre-project emissions that should apply to the Facility as a Texas-based project."

As mentioned above, this comment incorrectly states the dairy is a new construction dairy and the digester applied to LCFS as a greenfield project. Also, the images presented in Exhibit B are not of Hartley Farms. The correct timeline and images of the farm are available in the LCA and CARB Staff Summary.

"Request for Information and Clarification

i) CARB should decline to approve the Application as it claims inaccurate and misleading methane reductions which depart from CARB's established practice in determining the Facility's appropriate emissions baseline.

ii) CARB should publish a detailed policy statement and guidance for LCFS applicants and verifiers on how to properly utilize the CA-GREET 3.0 model in calculating the avoided methane emissions (and carbon intensity scores) for upgrades and conversions of a low methane baseline dairy to a higher-methane baseline dairy (i.e. from dry-lot manure management to liquid-manure management).

iii) CARB should define how to establish the baseline emissions for greenfield dairies and herd relocations.

iv) CARB should establish a uniform standard for "additionality" in order to

discourage dairy operators and investors from forum-shopping for jurisdictions that offer an economic advantage over California-sited projects. v) CARB should publicize activities of verifiers that are designed to exploit the imperfections of LCFS for their own financial gain."

The above comments are addressed to CARB and advocate new/different policies than those applicable to this application, so they do not fall under the application of the fuel pathway. Greengasco, LLC submitted all the information and supporting documentation required to certify the Tier 2 fuel pathway application to CARB and an approved third-party verifier in accordance with sections 95488.7 and 95488.8 of the LCFS Regulation.

"Applicant, the Application's verifier, and/or CARB provide detailed information on the steps and calculations taken to establish the Facility's baseline methane emissions to inform other Tier 2 Pathway applications." "Action requested: Applicant should revise and resubmit application with the appropriate baseline for similarly situated projects in Texas using publicly available CARB guidance."

The baseline scenario is detailed in the LCA and the CARB Staff Summary. The commenter has not identified any factual errors regarding the facility's baseline methane emissions as calculated therein.

The concerns outlined in the commenter's letter are not relevant to the fuel pathway application. Following CARB's thorough review of our response, we contend that no modifications to this pending application will be necessary.

Sincerely,

Daryl Maas
CEO
Maas Energy Works, LLC