



Tesoro Refining & Marketing Company LLC

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SUBMITTED ELECTRONICALLY

September 15, 2021

Cheryl Laskowski, Ph.D
Chief, Transportation Fuels Branch
Industrial Strategies Division
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments on the Proposed New Temporary Pathways for Renewable Propane, Renewable Naphtha and Renewable Gasoline Blendstock and Alternative Jet Fuel

Ms. Laskowski:

Tesoro Refining & Marketing Company LLC, an indirect, wholly owned subsidiary of Marathon Petroleum Corporation, (collectively, “MPC”) appreciates this opportunity to provide comments on the California Air Resources Board’s (CARB) proposed new Temporary Pathways for Renewable Propane, Renewable Naphtha and Renewable Gasoline Blendstock, and Alternative Jet Fuel. Pursuant to section 95488.9(b)(4) of the Low Carbon Fuel Standard (LCFS) regulation,¹ the Executive Officer may approve a new Temporary Pathway for a fuel or feedstock fuel combination not found in Table 8 of the LCFS regulation.

The proposed changes to the Temporary Pathways are meant to clarify the Temporary Pathway carbon intensity (CI) values are applicable to renewable fuels produced by “various fuel production technologies approved by the Executive Officer (e.g., hydrotreating, fluid catalytic cracking [FCC]).” This appears to mean CARB has determined the Temporary CI values are available for use by a petroleum refinery co-processing renewable feedstocks including, Fats/Oils/Grease Residues and any feedstock derived from plant oils, excluding palm oil and palm derivatives. The Proposed Temporary Pathways apply to hydrotreating and FCC technologies, comments and recommendations made here will focus solely on the FCC technology.

CARB has hosted five workshops on co-processing, the first on December 13, 2016 the final and fifth on October 19, 2018. Additionally, CARB’s Staff Discussion Paper² “Co-processing of Low Carbon Feedstocks

¹ All citations to the LCFS Regulation are found in Title 17, California Code of Regulations (CCR), sections 95480-95503

² Accessed 9/9/2021:

https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/lcfs_meetings/053017draft_discussion_paper_coprocessing.pdf

Ms. Cheryl Laskowski

September 15, 2021

Page 2

in Petroleum Refineries” was issued May 30, 2017. Many of the conversations in these workshops discussed techniques to quantify the biogenic fractions in FCC co-processed products, with the fourth and fifth workshop specifically intended to address this issue. MPC understands CARB has been evaluating a pathway that involves co-processing in a FCC for the past three years. It is time for CARB to hold a sixth public workshop to detail its current approach on techniques to quantify the biogenic fractions in FCC co-processed products and to provide any new information developed since the fifth workshop was held nearly three years ago. With this, MPC recommends CARB take the following steps prior to approving any pathway application.

1. CARB to host a sixth public workshop on co-processing to detail CARB’s current approach to FCC co-processing.
2. CARB issue a Final Regulatory Guidance document, with time for public comments.
3. CARB post a CI calculator template for co-processing on CARB’s website.

Each of these steps are critical to ensure co-processors understand the regulatory requirements they must meet to receive credits under the LCFS regulation. They are also needed to ensure a consistent application of tools and methodologies used to quantify the biogenic fraction in FCC co-processed products.

Consistent application of tools and methodologies is particularly important because a FCC co-processor relies on a material balance to quantify the mass and volume of the biogenic material produced, whether it is compared with a ¹⁴C analysis or not. The Final Regulatory Guidance must address this issue by including a description of the inputs and outputs required for CARB to assess the efficacy of the material balance. Inputs include the water and oxygen content in a feedstock while outputs include inerts (e.g. CO, CO₂, H₂O) and liquid products (e.g. C₃, C₄, C₅+) produced through the FCC conversion process. This will ensure historical practices used to analyze data do not interfere with the quantification of biogenic FCC products in the transportation pool. For example, normalization of mass yields, after removing the mass of inerts due to the presence of oxygen in a renewable feedstock from a material balance, should not be considered appropriate³. The need for a consistent accounting application is particularly important for CARB to address because the types of feedstocks being co-processed will grow over time, resulting in varying yields impacting the number of emission reductions within the transportation fuel system.

Thank you for your time on the matter.

Sincerely,



Brian McDonald
Regulatory Affairs Specialist

Cc: Anil Prabhu, Manager, Fuels Evaluation Section
Rui Chen, Manager, Fuel Project Evaluation Section

³ Accessed 9/9/2021, page 147 to page 153, Examples 5-2, 5-3: [Fluid Catalytic Cracking Handbook - Ventech! \(yumpu.com\)](https://www.yumpu.com/en/document/view/11111111/Fluid-Catalytic-Cracking-Handbook-Ventech)