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VIA EMAIL
(LCFSworkshop@arb.ca.gov)

Sam Wade
Chief Transportation Fuels Branch
California Air Resources Board
1001 I Street
Sacramento CA, 95814

Dear Mr. Wade:

Kern Oil & Refining Co. (Kern) is providing comments on the California Air Resources Board's (ARB) September 14, 2017, workshop regarding the Refinery Investment Credit Pilot Program (RICPP). Kern is providing comments in the following areas: (1) Carbon Reduction Threshold; (2) Process-level GHG accounting; and (3) Eligible Projects.

Kern is an independently owned, small refinery located in the Southern San Joaquin Valley, just outside Bakersfield, California. From the inception of the Low Carbon Fuel Standard, Kern has been acutely aware of the potential inequalities that result from methodologies adopted to effectuate program goals in a manageable manner for ARB. At a crude oil capacity of 26,000 barrels per day, Kern is the smallest refinery in California currently producing transportation fuels. Given the vast discrepancy in facility size and complexity in the refining sector, a "one size fits all" methodology puts Kern at a distinct disadvantage to its competitors. The Board has previously acknowledged and directed Staff to consider these inequalities. Kern respectfully requests this consideration be extended by Staff in the current proposed amendments.

Revision to Carbon Reduction Threshold

For the RICPP to truly incentivize refiner investment in emissions-reducing projects, the Carbon Reduction Threshold must be attainable for refineries of all sizes. Kern opposes any change that would raise the current minimum threshold of 0.1g CO2e/MJ for Kern. A threshold of 0.1g CO2e/MJ equates to reductions of approximately one and a half percent of Kern's annual emissions. Raising the threshold will make it impossible for smaller refineries like Kern to benefit from the program.

If ARB is intent on altering the threshold, Kern urges ARB to establish a threshold that couples the amount of reduction to a refinery specific ratable parameter, as opposed to setting a fixed value. The disparity of GHG emissions among California refineries is enormous. The top four GHG

emitters in the refinery sector consistently report GHG emissions greater than three million metric tons of CO2e per year. Kern by contrast has averaged 140,000 metric tons per year over the past four years. A threshold based on a fixed percentage of total refinery GHG emissions, or total energy output of the volume of fuel produced, would effectively achieve ARB's goal of reducing GHG emissions but avoid sizing out smaller refineries from the RICPP. Greater emissions reductions could be achieved utilizing either of these approaches while still allowing small refineries to participate.

If ARB prefers an absolute reduction threshold, Kern recommends implementation of tiered thresholds based on refinery size and/or annual reported GHG emissions. Implementation of a single "one size fits all" absolute reduction threshold would unfairly disadvantage smaller facilities with less GHG emissions. For example, Staff utilized a fixed reduction of 25,000 metric tons as an example in workshop materials. A reduction of this magnitude is almost 19% of Kern's 2016 annual GHG emissions – an impossible feat to achieve – but represents a reduction of less than 1% of annual emissions from any of the four larger refineries referenced above. Even the existing threshold of 0.1gCO2e/MJ would easily drive double this suggested fixed reduction from those top emitters. While a tiered approach could help "even the playing field," and is more equitable than a single target, tiered thresholds would still disadvantage the smallest refineries by averaging them among other refineries, rather than awarding credits based on individual metrics.

Process Level GHG Accounting

Given the wide differences in the refinery sector, ARB must incorporate concepts allowing for maximum flexibility in accounting for GHG emissions at the process unit level. Kern is sensitive to ARB's desire to develop a robust GHG accounting methodology at the process unit level in order to facilitate determination of emissions reductions within a project boundary. Refineries however utilize a variety of data sources and methodologies to quantify and account for the material inputs, necessary utilities, and product outputs. No two refineries are alike, and no two refineries employ identical means to account for these parameters. These wide discrepancies necessitate flexibility for refiners to account for GHG emissions at the process unit level.

ARB allows for a variety of means to demonstrate operating data and process inputs within the Mandatory Reporting Regulation (MRR), as well as within LCFS fuel pathway applications. Metering, material invoices, engineering estimates, equipment rating/manufacturer information, and professional accounting practices should all be similarly incorporated as acceptable means of determining emissions reductions from refinery projects. Emissions reductions achieved within the RICPP are the direct result of comparing pre- and post-project emissions; therefore, the integrity of the emissions reduction achieved is hinged in the use of consistent measurement approaches across the pre- and post-project estimation methodologies. For example, if fuel consumption to a piece of fired equipment is determined via natural gas purchase records within the pre-project emissions calculation, then fuel consumption in the post-project emissions calculation should also be provided using purchase records, or an equally robust means. This consistency will provide for appropriate data comparisons while allowing for the necessary accounting flexibility.

Kern further urges ARB to consider aligning any new requirements for data accuracy and/or device calibration specific to RICPP with existing requirements already in place under MRR. Refineries have made significant investments to accommodate for data accuracy requirements within MRR, including coordinating schedules and events for making devices available for timely calibrations. Any new conditions imposed as a result of these amendments should take these existing accommodations into consideration in order to avoid unnecessary interruptions and duplicity.

Eligible Projects

While Kern appreciates Staff's intent to simplify the credit calculation method and make it applicable to a broad range of refinery investment projects, some additional specificity is needed on what constitute RICPP eligible projects. During the workshop, Staff outlined their intention to identify the specific project types eligible for refinery investment credits and cautioned that not every project that leads to GHG reductions is eligible for RICPP credits. Kern urges ARB remain open to the universe of projects where GHG emissions reductions can be demonstrated and quantified rather than listing specific types of projects as a limiting factor.

Kern is specifically concerned regarding which projects will be considered "minor equipment replacement." Kern's unique size and configuration lend to a different magnitude of projects which can result in meaningful emissions reductions. What is considered a routine equipment replacement by a large oil refiner is oftentimes a more significant capital project for Kern. As an example, Kern is currently replacing several internal combustion engine-driven compressors with electric-driven compressors. While this is a notable capital investment for Kern, a similar project could be considered insignificant to a refinery 10 times the size of Kern.

Small refineries are disproportionately impacted by limited access to capital and the inability to realize economies of scale. These become very real considerations in determining viable options for projects. Placing regulatory limitations on projects based on equipment type, project cost, or operational outputs will only serve to further disadvantage small refiners by creating a program that is unattainable to them.

In conclusion, Kern appreciates ARB's consideration of Kern's comments. As always, Kern is committed to working with Staff throughout this regulatory process. Please do not hesitate to reach out to me at (661) 845-0761 with any questions.

Sincerely,

Melinda L. Hicks
Manager, Environmental Health and Safety
Kern Oil & Refining Co.