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VIA ELECTRONIC POSTING

Eileen Hlavka
ARB Staff Lead on Refinery Allocation
California Air Resources Board
1001 I Street,
Sacramento, CA 95814

Re: Comments on August 13 Workshop on Refineries and Related Industries

Dear Ms. Hlavka:

Kern Oil & Refining Co. (Kern) is providing comments on the California Air Resources Board's (ARB) August 13, 2013, workshop regarding establishing a new refinery sector compliance approach and benchmark for the second and third compliance period, and ARB's refinery true-up proposal. Kern continues to have serious concerns regarding ARB's development of the refinery benchmarking regulatory scheme and the continued failure of ARB to perform due diligence on issues raised by its own consultants and stakeholders a full year ago, most obviously the treatment of smaller atypical California refineries.

Critical issues remain unresolved and staff is quickly running out of time to address them. For example, although staff discussed potential benchmarking methodologies at the workshop – essentially the Carbon Weighted Tonne (CWT) versus iterations of the Carbon Weighted Barrel (CWB) – absent was any specific data regarding the actual anticipated benchmark. ARB previously acknowledged the obvious differences across the California refinery sector in adopting a two-tiered approach to benchmarking for the first compliance period. ARB's sole justification for changing course for the second and third compliance periods and establishing a single benchmark for refineries, which frankly are incomparable based on size and complexity alone, is to establish consistency with its regulation of other industries. Absent from staff is any data or hard analysis suggesting that such an approach is actually appropriate for the refining sector. The vague, overused "one product one benchmark" mantra is not a substitute for actual analysis and fails to provide any justification for utilizing that approach in the refinery sector.

Kern is specifically providing comments on the following: (1) Use of the WSPA-CWB for the Refinery Product-Base for Allocations; (2) Inappropriateness of the Proposed Timing and True-

Up Methodology; (3) Need for Release of Survey Data Results and Any Analyses Performed; (4) Continued Failure of ARB to Address Atypical California Refineries; and (5) Need for Peer Group Benchmarking.

Use of the WSPA-CWB for the Refinery Benchmarking Product

- Staff's presentation at the Workshop outlines three potential allocation methodologies: (1) Adjust the CWT; (2) CWB-Based Allocation with Adjustment; and (3) CWB-Based Allocation without Grouping. Staff identified Option 2 as its currently preferred Option. Kern recommends Option 3 – the CWB-based allocation because staff has not provided adequate justification for the proposed adjustments to the WSPA-CWB methodology under Option 2.

- A CWB based approach is preferable to the CWT given that California refineries are more akin to worldwide refineries as opposed to the European refineries, as established by the correlation factors presented by staff at the workshop.[1]

- On CWB Option 2, the primary adjustment proposed by staff as between Option 2 and 3 is a grouping of certain process units to allegedly "Maintain incentive to use most efficient technology available" and to encourage replacing equipment.[2] However, given the large scale equipment that staff proposed to group, e.g., Cokers, Fluid Catalytic Cracking and Hydrogen Production, such physical "replacement" of actual process units is realistically and financially infeasible.[3] ARB needs to provide additional data and analysis to explain how this incentive could be effectuated through the proposed "grouping." Grouping of what ARB views as similar processes loses the granularity that is intentionally provided by the distinct processes in the methodology. For example, WSPA-CWB lists five separate types of hydrotreaters, with CWB factors ranging from 0.75 to 1.80; this is because of distinct differences in hydrotreating the variety of hydrocarbon intermediate streams represented by each of the five types of hydrotreaters represented.

- The "grouping" proposed under Option 2 also unduly sacrifices accuracy for the sake of simplicity. Indeed, refineries already have all of the data needed under the more robust WSPA-CWB methodologies, as provided in response to CARB's recent survey.

- ARB needs to appropriately determine the boundary definition to be consistent with emissions totals, including the current failure to account for facilities utilizing cogeneration. One stakeholder voiced a concern at the workshop that no CWB factor exists for cogeneration. If cogeneration is included in the boundary definition for emissions, then it is imperative that a representative CWB factor be developed and incorporated into the methodology. Conversely, if cogeneration is to be excluded, then it is equally imperative for

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1 Cap and Trade Workshop on Refineries and Related Industries, August 13, 2013, Staff Presentation ("Staff Presentation), p. 20.

2 *Id.* at p. 11.

3 *Id.* at p. 12.

ARB to clarify how allocations will be determined and granted for those refineries in California that generate emissions from this process.

Inappropriateness of the Proposed Timing and True-Up Methodology

- Staff's presentation proposes to add a true-up for non-EII facilities based on actual production volumes of primary refinery products in the same year as the vintage of allowances allocated; however, such a methodology is inappropriate given that non-EII facilities allocations in the first compliance period were based on product data OR baseline emissions. Applying a true-up when allocations were based on verified emissions data representative of a series of consecutive years would be punitive, especially for those facilities whose production volumes stayed steady or increased but nonetheless demonstrated an overall emissions decrease.

- Staff proposes to add a true-up methodology for the first compliance period, but ARB gave no notice to stakeholders regarding the potential of a true-up for the first compliance period. Given refiners' inability to accurately calculate their own allocations and the fact that 7 of the 9 auctions for the first compliance period will have passed by the time the proposed amendments are finalized, the proposed first compliance period true-up is inappropriate retroactive legislation that would impose detrimental impacts on stakeholders with no ability to change their previous behavior (e.g., allocation purchases, or lack thereof, in the previous auctions).

Need for Release of Survey Data Results and Any Analyses Performed

- Overall, Kern has been disappointed in ARB staff's reluctance to analyze and consider stakeholder comments and concerns. As observed by an attendee during the workshop, staff seems to be inappropriately placing the burden on stakeholders to prove up their concerns instead of staff performing their own analysis. For example, ARB staff proposes to use the sulfur unit factor based on the EU-CWT; however, instead of providing justification for that decision, staff states its intention to reject the WSPA-CWB sulfur unit factor and rather use the EU-CWT factor, "**[u]nless there are data available to support this difference.**"[4] Again with regard to the sulfur unit factor, staff states "[s]till need explanation for sulfur unit differences."[5] The onus should not fall on stakeholders to disprove ARB staff's proposals – staff must provide justification for its recommendations. Indeed, ARB is uniquely situated to perform analysis with access to data across the industry while individual stakeholders are limited to their own data. In addition, to the extent staff has performed analysis, there has been a lack of transparency as to the analysis performed, data collected and the results of that analysis.

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4 Staff Presentation, p. 13.

5 *Id.* at p. 14.

- Absent from the workshop was any discussion of the specific results of or staff's analysis of the survey data. Rather, vague statements like "[a]nalysis does not suggest that smaller refineries and larger refineries systematically would get a different % of the allowances they need" were made in lieu of specific results. [6] What analysis? What does staff mean by "systematically"? While Kern acknowledges that staff is dealing with proprietary business information, other ARB departments routinely manage to release data in a way that maintains confidentiality but nonetheless sheds light on the analysis done by staff and the results of that analysis. Stakeholders are absolutely due this level of response from staff in this case too.

- Staff referenced potential "outliers" or "anomalies" in the data. Please provide further detail on these outliers/anomalies.

Need to Address Atypical Refinery Benchmarking

- ARB staff stated at the workshop that they do not intend to deal with atypical refineries separately and that the "data" does not show a "systematic" difference. First, as set forth above, staff gave no explanation as to what data it was relying on or what analysis it had performed to come to that conclusion. Second, over the course of the workshop, the comments made by the Solomon representatives as well as the stakeholders clearly demonstrates that there is a relevant efficiency distinction related to the structural constraints of smaller atypical refineries as compared to the major large complex refineries in California. Those structural constraints – as pointed out by the industry expert Solomon - need to be given appropriate consideration by ARB in determining the proper benchmark for those refineries.

- ARB inappropriately focuses on the definition of "atypical" refineries for purposes of the European Union; however, what may have been an atypical refinery in Europe does not determine what may be an atypical refinery in California. During the workshop, Solomon representatives stated that in every benchmarking they have participated in worldwide, each region has had its own "atypical" refineries. For purposes of California, atypical may not be defined by a single unifying criterion; rather atypical may simply be those refineries that do not match the mainstream – for example, on the basis of production (asphalt) or size.

- Acknowledging the efficiency limitations imposed by refinery size is critical for benchmarking purposes. Solomon expressly stated that small refineries lack opportunities for heat integration and to advantage themselves of the economies of scale, which benefit large refineries. Solomon, in fact, went on to state that a smaller refinery **cannot** fairly be compared to the efficiency of a super refinery. Again, it also goes back to incentive – is ARB trying to incentivize smaller refineries to size up to the largest refineries in California to make themselves on paper more efficient?

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6 Staff Presentation, p. 19.

- Although the CWB may be an appropriate "product" for atypical refineries, what is not appropriate is comparing those refineries to the efficiency of larger refineries. For example, Solomon stated that although a glass manufacturer may have an accurate CWB score, it nonetheless would not make sense to benchmark that glass manufacturer against the CWB of refineries. Similarly, for smaller refineries, although they may be able to have an accurate CWB score, infrastructure limitations prevent those refineries from ever achieving a benchmark set by performance of much larger refineries – i.e., their CWB scores cannot be fairly compared.

- Solomon also suggested that merely plotting out each refinery's CWB and size would show natural outliers - has staff performed that analysis? What are the results? CARB's recent survey requested that refiners provide their Equivalent Distillation Capacity (EDC) and Nelson complexity scores. Have these data been plotted and/or compared with the distribution of California refineries' CWB scores?

- Kern urges staff to work with the industry expert – Solomon – to appropriately analyze what refineries in California may be atypical and, if so, the appropriate way to handle those refineries.

<u>Need for Peer Group Benchmarking</u>

- ARB has precedent in acknowledging the uneven playing field of the California refinery sector, for example: (1) in setting separate compliance targets for Non-EII versus EII refineries in the first compliance period for Cap and Trade; and (2) in Low Carbon Fuel Standard, the proposed low-energy use low-complexity refinery provision, which will acknowledge the low carbon intensity imbedded into low-energy use refineries. Indeed, the refineries that Ecofys' report initially highlighted as potentially "atypical" nearly identically align with the refineries LCFS has identified as low-energy use low complexity refineries.

- Staff should consider analysis performed by the Low Carbon Fuel Standard staff in developing the low-energy use low-complexity refinery provision, which found clear peer groups within the refinery sector. ARB Cap and Trade staff should utilize that analysis in determining appropriate peer groups for purposes of Cap and Trade.

- Solomon gave the example of the United States EPA Energy Star Program, which groups refineries into size based peer groups for determining energy efficiency. The Energy Star Program acknowledges that it is inappropriate to judge smaller refineries by larger refineries' efficiency standards, which should be similarly acknowledged by ARB. ARB should look to the Energy Star program as a model for benchmarking.

- Facility improvement will not be sufficient to reach the anticipated benchmarking goals and the only other option for compliance is the cost to purchase credits. If the goal of Cap-and-Trade is CO2 reductions as opposed to revenue generation, benchmarking needs to be altered in a way that it does not monetarily penalize refiners beyond reasonable facility improvements to reduce emissions.

In conclusion, Kern appreciates CARB's consideration of Kern's comments and looks forward to receiving the clarifications requested. This matter is far too critical, its impacts far too significant to not get it right. As always, we are committed to working with staff throughout this regulatory process.

Sincerely,

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