(Submitted online at https://ww2.arb.ca.gov/public-comments/comment-log-advanced-clean-cars-ii-amendments-november-workshop)

January 16, 2024

Re: CARB's November 2023 Workshop on Amendments to Advanced Clean Cars II Regulation

Dear Sir or Madam,

Cummins appreciates the opportunity to provide comments regarding amendments to CARB's Advanced Clean Cars II (ACC II) regulation. Cummins actively engaged in CARB's rulemaking process for ACC II. In our May 2022 written comments, we expressed technical concerns with adopting in-use testing requirements and standards which CARB had developed for the Heavy-Duty (HD) Omnibus Low Oxides of Nitrogen (NOx) rule for HD engine certification and compliance and applying them directly to chassis-certified medium-duty vehicles (MDV) in LEV IV.[1] Since then, in May 2023 the U.S. Environmental Protection Agency (EPA) proposed Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles which include new NOx certification and in-use standards for MDV.[2] Also, in July 2023, CARB and HD manufacturers including Cummins entered into an agreement which includes a commitment by CARB to align their 2027 HD Omnibus Low NOx regulation with EPA's 2027 HD NOx regulation finalized as part of the Clean Trucks Plan.[3] Cummins supports amendments to ACC II that would address our previous concerns and take into consideration the new developments mentioned above:

- In light of CARB's July 2023 commitment to align 2027 HD engine in-use requirements with EPA, CARB should also align ACC II MDV in-use testing procedures and standards with EPA's 2027 HD NOx Two-Bin Moving Average Window (2B-MAW) protocol and limits, replacing ACC II's existing requirements based on 3B-MAW protocol and 0.020 g/hp-hr NOx standard. As part of this alignment, CARB should also adopt the Portable Emissions

[1] See https://www.arb.ca.gov/lists/com-attach/396-accii2022-UDMBcl0xVWsAbwNt.pdf.
[2] See https://www.govinfo.gov/content/pkg/FR-2023-05-05/pdf/2023-07974.pdf.
[3] See https://ww2.arb.ca.gov/news/carb-and-truck-and-engine-manufacturers-announce-unprecedented-partnership-meet-clean-air.

Cummins Inc.
500 Jackson Street
Columbus, IN 47201 USA
Phone 1-812-377-5000
cummins.com

Measurement System (PEMS) accuracy margins adopted in EPA's Final Rule.

- CARB should consider amendments to adjust ACC II MDV in-use limits according to the Federal Test Procedure (FTP) certification bin level, similar to how CARB and EPA's HD engine-based in-use NOx limits adjust proportionally for HD engines certifying at a Family Emission Limit different from the standard.
- To reduce error in 2B-MAW in-use emissions calculations, CARB should consider amending ACC II to allow manufacturers to use engine control module broadcasted torque to determine work for bin placement and brake-specific emissions calculations, rather than using an FTP-based CO_2 value as a surrogate for work. EPA has proposed a similar approach for non-carbon containing fuels at 40 CFR 1036.530(j) in their proposal for Phase 3 Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles.[4]
- Alignment between ACC II and EPA Multi-Pollutant MDV standards is essential to assure the greatest improvements are achieved in the most cost-efficient manner and to provide vehicle and engine manufacturers, suppliers, and end-users with the certainty necessary for investment in technologies to improve emissions. We urge the agencies to continue working together.

Cummins is committed to continuing to work with CARB, EPA, and other stakeholders on future MDV regulations. For any questions, please contact me at jackie.m.yeager@cummins.com.

Sincerely,

Jackie M. Yeager

Jackie M. Yeager
Director – Emissions and Fuel Efficiency Policy
Product Compliance & Regulatory Affairs
Cummins Inc.

[4] See https://www.govinfo.gov/content/pkg/FR-2023-04-27/pdf/2023-07955.pdf.