Advanced Clean Fleets (ACF) Rule

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Testimony Before the California Air Resources Board

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I am Dr Richard Jackson, a Pediatrician and Professor emeritus at the UCLA Fielding School of Public Health. I have interacted with CARB many times and I thank the Board for its leadership over the years. My past service includes as the California State Public Health Officer, and my federal service includes nine years as Director of the Centers for Disease Control’s National Center for Environmental Health. I join you today to urge the Board to adopt the strongest possible Advanced Clean Fleets (ACF) rule.

You may have heard about something that many young families in America are now confronting: we are in the midst of a large RSV, Respiratory Syncytial Virus, outbreak. This infection, which is a nuisance for healthy adults, can make very young children deathly ill. Latest CDC data indicates that 58,000 children have been hospitalized with it, and with over 200 deaths of children under age 5.[[1]](#endnote-1) Why do children suffer so much more? It goes back to what we learned in middle school, when you decrease he radius of a circle, you decrease its area as a square function: that is, if the radius declines from 3 to 1, you decrease the area by nine times. These numbers are fundamental to a child’s breathing. The cross-sectional area of a pipe, including the pipes in our lungs (the bronchi and bronchioles), determines air flow. Small constrictions of children’s already narrow pipes cause large decreases in air flow. One effect we see is “air hunger” --terrifying for the child and her parents.

But not just viruses slow air flow, so do irritants like nitrogen oxides and particles. Relative to their body weight children move 2-3 times more air than do adults, and children need to play and exercise outside—then they move ten times or more air. Up until about age six, the young child’s lungs are growing their lifetime supply of new alveoli, the little air sacs essential to gas-exchange. These early years of life are critical for lung growth, and remain important when older. Early life lung damage reduces lifelong ability to cope with intensive exercise or respiratory infections. n my PBS television series, I interviewed families and children near the ports of Oakland and Long Beach, and in Boyle Heights near the Freeway tangle in LA. The Board members know better than anyone that some of California’s worst air quality is in areas with large numbers of heavy-duty vehicles including Class 8 diesel tractor trucks which emit 62 percent of nitrogen oxides and 57 percent of fine particulates. Children need the Board to move the Advanced Clean Fleets (ACF) rule four years earlier: four years is a preschooler’s lifetime. Delaying means cheating children of the lung function they need now, and for the rest of their lives.

Respectfully submitted to CARB Hearing October 27, 2022

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