

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**

COMMITTEE ON ENERGY AND COMMERCE

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December 18, 2013

Dr. Barry Wallerstein  
Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765

Dear Dr. Wallerstein:

Last Friday, the *Los Angeles Times* reported that elevated levels of ultrafine particle pollution have been measured in the residential neighborhoods downwind of Santa Monica Airport (SMO).<sup>1</sup> The report cited recent research from scientists at UCLA and the California Air Resources Board (CARB), who found that ultrafine particle levels were between four and thirty-seven times higher in the area downwind of SMO than in a neighboring area.<sup>2</sup> This research confirms findings from an earlier study by scientists at UCLA, USC, and CARB.<sup>3</sup>

I am writing to request your assessment of this information and any recommendations you may have regarding steps to understand and properly address this pollution issue.

I have long been concerned about air pollution at SMO and its impacts on the health of those living near and working at the airport. The recent study from UCLA and CARB suggests that aircraft at SMO may affect public health due to their emissions of ultrafine particles. Particulate matter pollution is known to cause a wide range of health impacts, including premature death, heart attack, irregular heartbeat, aggravated asthma, and decreased lung function. Research on ultrafine particles—the smallest types of particulate matter—is ongoing, but suggests that these ultrafine particles likewise pose significant health implications, which

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<sup>1</sup> *Big disparities in air pollution detected in L.A. neighborhoods*, Los Angeles Times (Dec. 13, 2013) (online at [www.latimes.com/science/sciencenow/la-sci-sn-air-pollution-neighborhood-ultrafine-particles-20131213,0,7983027.story](http://www.latimes.com/science/sciencenow/la-sci-sn-air-pollution-neighborhood-ultrafine-particles-20131213,0,7983027.story)).

<sup>2</sup> Wonsik Choi, Shishan Hu, Meilu He, Kathleen Kozawa, Steve Mara, Arthur M. Winer, and Suzanne E. Paulson (2013), Neighborhood-scale air quality impacts of emissions from motor vehicles and aircraft, *Atmospheric Environment* 80: 310-321.

<sup>3</sup> Shishan Hu, Scott Fruin, Kathleen Kozawa, Steve Mara, Arthur M. Winer, and Suzanne E. Paulson (2009), Aircraft emission impacts in a neighborhood adjacent to a general aviation airport in Southern California, *Environmental Science & Technology* 43: 8039-8045.

may be distinct from the impacts of larger particles. For example, ultrafine particles which are 0.1 microns or smaller in diameter—the size of viruses—can penetrate cell membranes, pass through the lungs and into the bloodstream, and cause heart disease and inflammation of the brain.<sup>4</sup>

In light of these findings and concerns, I would appreciate your assistance with the following questions:

- What does the latest scientific research reveal about ultrafine particle pollution and the potential impacts of this pollution on human health? Is SCAQMD looking into these issues?
- What is SCAQMD's assessment of the implications of UCLA and CARB's findings on ultrafine particle pollution at SMO? What threats do the particle levels measured in the study pose to workers' health and the health of the community that neighbors SMO? Do the levels of ultrafine particles from SMO exacerbate the problems in the area with PM2.5 (i.e., particulate matter of up to 2.5 microns in diameter)?
- Are existing regulatory efforts at SCAQMD or other agencies to address PM2.5 pollution adequate to address ultrafine particle pollution at SMO? Are there any specific regulatory efforts at SCAQMD or other agencies that address problems unique to ultrafine particle pollution at SMO? If so, what do these efforts entail?
- Are additional measures needed to address ultrafine particle pollution at SMO? If so, what additional steps are needed and what agencies—local, state, and/or federal—will need to be involved?

The residents neighboring SMO and those who work there are entitled to a safe living and working environment, including clean air protected by pollution controls and responsible management practices. I appreciate your attention to this and to other air quality problems at SMO.

Sincerely,



Henry A. Waxman  
Ranking Member

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<sup>4</sup> See, e.g., Presentation by Dr. John Froines, Southern California Particle Center, UCLA, *Air Pollution and Its Health Effects* (Sept. 12, 2012) (online at [hydra.usc.edu/scehsc/pdfs/Froines%20-%20Air%20Pollution%20and%20Its%20Health%20Effects%209-12-12.pdf](http://hydra.usc.edu/scehsc/pdfs/Froines%20-%20Air%20Pollution%20and%20Its%20Health%20Effects%209-12-12.pdf)).