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Statement of Janice E. Nolen  
Assistant Vice President, National Policy  
American Lung Association

Clean Air Scientific Advisory Committee

May 23, 2016

Review of the  
Draft Integrated Review Plan for the  
National Ambient Air Quality Standards for Particulate Matter

Thank you for the opportunity to provide comments on behalf of the American Lung Association on the Draft Integrated Review Plan for the Particulate Matter National Ambient Air Quality Standards.

We at the American Lung Association have long weighed in on the NAAQS for particulate matter, including participating in legal matters related to the Clean Air Act requirements that the standards protect public health with an adequate margin of safety and that the U.S. Environmental Protection Agency (EPA) complete the review every five years. We have participated actively in EPA reviews and CASAC public meetings for decades.

We have tracked the improvements in air quality since the late 1990s in our annual “State of the Air” report. The reduction in particulate matter, especially the day-in and day-out exposure recorded in the average annual measurements, demonstrates the crucial role that the NAAQS have played in driving reduction in the nation’s most widespread air pollutants. To meet the standards, EPA, states, and local governments have taken steps to reduce emissions. As new research shows in study after study, those steps have quite literally saved lives.

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The more researchers study the effects of particulate matter, the more we learn about the widespread impact these particles have on human health. Evidence has grown beyond the initial focus on respiratory and cardiovascular health and mortality to identify impacts to multiple systems in the human body, including reproductive and developmental systems, central nervous systems and cognitive systems. With reduced particle concentrations, the effects at lower levels have become clearer. As analyses have grown with larger and longer-studied cohorts, researchers have better distinguished the complications of multiple pollutants and the components of particles.

This growing evidence is exactly why the authors of the Clean Air Act required a regular review of the science to determine if the standard protects public health with the requisite margin of safety. The American Lung Association is pleased that EPA has initiated this review. However, we are concerned that the proposed schedule has the review ending in 2021, nearly a decade after the last extended review ended and almost four years longer than the five-year timetable required by the Clean Air Act. In our experience, the final schedule rarely, if ever, meets the timing in the proposed schedule. We urge you to look at ways to accelerate this review.

The American Lung Association supports the overall approach of the Draft Integrated Review Plan, especially EPA's plans for public discussions and transparencies in the deliberations and evidence review. Given the growing complexity of the evidence, the Draft Review Plan identifies crucial priorities for CASAC and EPA's focus in this review. The following are some specific comments on the draft plan:

### **Overall**

- We support the proposal to focus on the emerging health effects of particulate matter examined in the 2009 review where new evidence can help inform the conclusions about causality and exposure.
- We support the proposal to follow the previous CASAC recommendations to focus on PM<sub>10-2.5</sub> as well as PM<sub>2.5</sub>, with PM<sub>10</sub> research supplementing that review rather than being the core perspective, and the continued examination of ultrafine particles.
- We support the enhanced understanding of populations at risk, particularly those with combinations of potential risk factors or who face different exposures in diverse cities.
- We support the examination of monitoring particulate matter. In the past few years, widespread issues with data collection and evaluation have eliminated or limited public information about particulate matter levels in Illinois, Florida, most of Tennessee and much of Georgia.

### **Long-term Exposure**

- Given the newer research finding premature deaths associated with levels well below 12 µg/m<sup>3</sup>,<sup>1</sup> and the World Health Organization's guidelines for PM<sub>2.5</sub> annual level of 10

$\mu\text{g}/\text{m}^3$ , we urge the EPA to recognize that the 2012 annual standard fails to adequately protect public health.

- We support EPA's proposal to explore in depth particulate matter as a carcinogen, following the decision of the International Agency for Research on Cancer that specifically reached that conclusion in 2013.
- We support the examination of the relationship between long-term exposure and the development of asthma and other diseases, such as diabetes.

### Short-term Exposure

- Given the newer research finding health outcomes associated with levels well below the 24-hour standard of  $35 \mu\text{g}/\text{m}^3$ <sup>2</sup> and the World Health Organization's guidelines for PM<sub>2.5</sub> 24-hour level of  $25 \mu\text{g}/\text{m}^3$ , we urge the EPA to recognize that the 2012 annual standard fails to adequately protect public health.
- We urge EPA to reconsider the form of the short-term standard; specifically, to recognize that the 98<sup>th</sup> percentile form fails to protect public health. That form dates to 1997 and allows 21 days in the three-year review period to reach levels well above the standard, not including the additional days exempted as exceptional events such as wildfires. The 19-year old form allows excessive exposure under a standard that was established to recognize the harm from daily exposures.
- We urge EPA to recognize that the standard for short-term levels needs to be independent of the standard for long-term levels. These need to be independent for many reasons, not the least of which is that since elevated levels occur from sources that do not necessarily have year-round use, e.g. wood-burning devices.

In conclusion, we appreciate the opportunity to provide input into this critical review of the NAAQS for particulate matter. The review represents an essential step to protecting public health and again urge you to accelerate the schedule. We value this process and the hard work that the Committee and the EPA put into this review.

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<sup>1</sup> Shi L, Zanobetti A, Kloog I, Coull BA, et al. 2014. Low Concentration PM 2.5 and Mortality: Estimating Acute and Chronic Effects in a Population-Based Study. *Environ Health Perspect* 124:46-52; Crouse DL, Peter PA, van Donkelaar A, Goldberg MS, et al. 2012 Risk of Nonaccidental and Cardiovascular Mortality in Relation to Long-term Exposure to Low Concentrations of Fine Particulate Matter: A Canadian National-Level Cohort Study. *Environ Health Perspect* 120:708-714.

<sup>2</sup> Wellenius GA, Burger MR, Coull BA, Schwartz J. et al. 2012. Ambient Air Pollution and the Risk of Acute Ischemic Stroke, *Arch Intern Med.* 172(3):229-234.