Comments to EPA on its Proposed Rule on $PM_{2.5}$ NAAQS

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During this long PM NAAQS review process, the Lung Association provided several detailed written and oral comments in support of stringent $PM_{2.5}$ standards - an annual standard of 8 $\mu g/m^3$ and 24h standard of 25 $\mu g/m^3$. These levels are not only supported by current science but are also among the recommendations of the majority of the CASAC panel. In its rule, EPA proposes an annual standard in the range of 9-10 $\mu g/m^3$ and no changes to the level or form of the 24h standard. This proposed rule undermines science, does not meet the statutory requirement of the Clean Air Act to protect public health, does not include an adequate margin of safety to protect vulnerable groups, and therefore is entirely unacceptable. EPA's logic in soliciting public comment on specific levels of the 24h standard and on levels outside of the proposed annual standard range, without actually including them in the proposed rule is obscure. How does it propose to treat these comments in final rulemaking and if they are to be evaluated in the same way as those on the proposed levels, then why exclude them from the proposal?

1. For the level of the annual standard, our ask of 8 $\mu g/m^3$ is at the lower end of the majority CASAC recommendation - appropriately weighted epidemiologic studies from both US and Canada show $PM_{2.5}$ exposure is positively associated with mortality at concentrations below 8 $\mu g/m^3$; in a meta-analysis of 53 studies, 14 showed such associations at concentrations down to 5 $\mu g/m^3$. The CASAC majority noted that scientific evidence is consistent with no safe threshold of exposure and a possible supra-linear concentration-response function at lower levels. An annual standard of 8 $\mu g/m^3$ affords public health protection, with an adequate margin of safety to protect at-risk groups.
2. For the level of the 24h standard, our ask of 25 $\mu g/m^3$ is at the lower end of the majority CASAC recommendation. The CASAC members unanimously concluded that in the Draft PA, the EPA did not provide them sufficient information to adequately consider alternative form and level combinations of the 24h standard. Conditional on retaining the current form of the 24 h standard, the majority of CASAC recommended lowering the level citing substantial epidemiologic evidence from both morbidity and mortality studies including U.S. studies which show adverse effects below 25 $\mu g/m^3$. The majority also noted that controlled human exposure studies are not the best evidence to use in EPA's justification of retaining the 24h standard without revision because of their obvious and serious limitations. The annual standard is calculated as an average of averages[1] of daily levels and will not protect citizens from short-term peak exposures.

[1] Environmental Protection Agency Pt. 50, APPENDIX N TO PART 50—INTERPRETATION OF THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR PM2.5

3. For the form of the 24h standard, our ask of the 99th percentile is to ensure that half as many exceedances are exempted from regulatory accountability. This also factors in PM contributions from anthropogenic climate change such as from wildfires and dust storms which could be exempted as exceptional events. We note that CASAC recommended that in future reviews, the EPA provide a more comprehensive assessment of the form and level of the 24h standard and that the form be revisited. For vulnerable populations, the future is now.

In summary, I reiterate our asks of an annual standard of 8 $\mu g/m^3$, a 24h standard of 25 $\mu g/m^3$ set at the 99th percentile. This is a unique opportunity for this EPA to set meaningful and effective $PM_{2.5}$ NAAQS to truly protect public health from deadly particle pollution. It is also required by the Clean Air Act. Thank you.