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Oral Comments of John Bachmann on the Environmental Protections Agency's (EPA) Proposed Action on National Ambient Air Quality Standards (NAAQS) for Particulate Matter

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Thank you. I represent the Environmental Protection Network (EPN), a volunteer organization of former EPA employees and others concerned about public health and the environment. Working in EPA's Air Office on science/policy for 33 years, I had a lead role in all reviews of the particulate matter (PM) standards through 2006.

Our comments focus on how this proposal breaks with all past PM proposals. Paramount is the risible rationale for not revising the standards, which ignores the conclusions of EPA's own experts. Its dismissal of the evidence stands in stark contrast to the conclusions reached by five prior EPA Administrators, who were presented with epidemiological results that adverse health effects were occurring at levels below the then current PM standards. Based on EPA's assessment of the evidence, the rationale presented in this proposal is wholly inconsistent with the mandate of the Clean Air Act to set standards requisite to protect the public health with an adequate margin of safety.

Process. Beginning two years ago this month, EPA Administrators have taken steps that broke the NAAQS process and crippled the Clean Air Scientific Advisory Committee (CASAC).[1] We believe the EPA authors of the science and policy assessments did a commendable job under these constraints, addressing CASAC comments and explaining why they rejected suggestions by some members on causality and the current standards.

Breaking with past proposals. Given the continuing explosion of research on fine particles since the 1997 standards, recent PM proposals announced a "provisional assessment" of studies published after the cutoff date for the science (criteria) assessment, reflecting the Clean Air Act requirement that such assessments accurately reflect "the latest scientific knowledge." Though many relevant

[1] Two years ago this month Administrator Pruitt issued an ill-conceived approach to ensure the reviews of the PM and ozone standards would be completed by the end of 2020. The process short-changed the time needed to produce and review multiple documents for two major pollutants. His successor compounded the problems by selecting a largely inexperienced group for the 7-member CASAC and eliminating the 20-member panel of PM experts that traditionally provided expertise and experience lacking in any CASAC. Most notably, this CASAC had no epidemiologists, the most critical discipline in a PM review.
The crippled CASAC as well as 20 former members of the disbanded PM panel recommended that EPA produce second drafts of two key documents for CASAC and public review, but the Administrator refused. EPA staff were forced to consider and address CASAC and public comments in the final versions. The proposal summarizes the CASAC comments and how they were addressed, but does not mention the public comments, particularly for the Independent PM Research Panel (IPMRP).

studies have been published since the January 2018 cutoff date, EPA has so far ignored this step. We footnote two pivotal examples.[2]

This proposal is the first not to present EPA's science/policy experts' position on the current standards. They conclude the available scientific evidence, air quality analyses, and the risk assessment, as summarized above, can reasonably be viewed as calling into question the adequacy of the public health protection afforded by the combination of the current annual and 24-hour primary PM2.5 standards (Final PM Policy Assessment 2020, p 106). They go on to recommend consideration of stronger annual standards as low as 8 to 10 ug/m.[3] The rationale in the proposal ignores these conclusions. In the 2006 review, the court remanded the annual standard in part because the Administrator did not explain why the decision departed from EPA staff and CASAC recommendations.

The Administrator's reluctance to give weight to recent epidemiology studies relies on conclusions on causality by a former industry consultant and two state toxicologists on CASAC. EPA staff ultimately found their views on causality inconsistent with the weight of evidence in the science and policy assessments, as well as the opinion of some on CASAC. As a number of former CASAC members have commented, they are also inconsistent with earlier CASAC reviews and recommendations on PM standards. The Administrator's demand for proof in controlled human studies of effects at levels below the current standards betrays both a deep misunderstanding of the purpose and limitations of such studies, as well as the precautionary nature of Section 109.[3]

The ill-supported suggestion by some members that newer scientific information since 2009 adds nothing new flies in the face of the basis of all past PM NAAQS reviews ,as summarized in the 2012 proposal: "The general approach used to translate scientific information into standards used in the previous reviews focused on consideration of alternative standard levels that were somewhat below the long-term mean PM2.5 concentrations reported in epidemiological studies" (U.S. EPA, 2011a, section 2.1.1). This evidence-based approach was also used by EPA staff, who used a number of credible studies that suggested effects well below the current standards to evaluate alternative annual standards.

In addition to listening to his own EPA experts, the Administrator should pay attention to the more balanced expert public comments he would have received directly if EPA had maintained or reinstated the PM panel, as was recommended by CASAC in a letter to the Administrator. You will be hearing from them soon. The current consensus of EPA's science/policy experts, some CASAC members and the 21-member Independent PM Research Panel is that the standards should be

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[2] The Administrator's rationale notes the lack of studies that examined reductions in fine particles. In earlier public comments, EPN noted two more recently published studies, one of which was awarded epidemiology paper of the year, that found that PM reductions in areas that classified as non-attainment were causally linked to decreased mortality. In both cases, the final levels were below the current standards. Zigler et al, 2018, Sanders et al, 2020

[3] How could controlled exposures simulate the multi-year effects of particles below 12 ug/m3 on sensitive populations? This requirement would be impractical and unethical. It also ignores the fact that while most studies found effects at higher concentrations, at least one study of overweight but otherwise healthy adults showed cardiac effects at exposure to unfiltered ambient air at 24 ug/m3 for 5 hours.

strengthened. The evidence and risk assessments strongly suggest an annual standard should be selected from a range of 8 to 10 ug/m3, and consideration given to a stronger daily standard.