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Dr. Tony Cox, Chair
Clean Air Scientific Advisory Committee
(1400R), U.S. Environmental Protection
Agency, 1200 Pennsylvania Avenue
NW, Washington, DC 20460;

December 6, 2018

Dear Chairman Cox and Distinguished Members of the Clean Air Scientific Advisory Committee:

Thank you for the opportunity of providing comments on the U.S. Environmental Protection Agency (EPA or Agency) Clean Air Scientific Advisory Committee (CASAC) review of the *Integrated Science Assessment for Particulate Matter (PM)*. My comments are offered as a former Associate Director for Science, and Deputy Director, of the Agency's Science Advisory Board (SAB) Staff Office from 2004 to 2011. As part of those duties, I was directly involved in scientific and administrative oversight of the chartered SAB, CASAC, Council for Clean Air Act Compliance (Council) and their standing and ad hoc committees. After retiring from federal service, I taught on-line undergraduate and graduate classes in the Environmental Science and Policy Program at the American Public University System. I am also a member of the Union of Concerned Scientists.

Having spent a career in regulatory science, let me thank you for your willingness to serve on CASAC. The application of science in the regulatory arena can be trying, in that the norms and values of the natural science community at large, comes face to face with a legal, socio-political, economic regulatory framework. Scientists are asked to formulate scientifically based advice and recommendations to inform senior, largely non-technical, decision-makers. When viewed through a purely scientific lens, it seems to be a fairly straightforward activity. It is! Unless of course, the science becomes a proxy fight by numerous special interests to influence the final regulatory decision. And it always does. That's the unique challenge for all CASAC deliberations. To review and analyze the content and veracity of EPA criteria pollutant documents; and to patiently listen to and review the scientifically relevant public comments pertinent to those documents. Some commenters will offer in-depth critical scientific review of Agency methods, interpretation, and conclusions. They should be given all due respect. Others will provide superficially plausible, but scientifically dubious arguments and comments. They too should be considered and addressed, but also recognized for what they are.

I raise the preceding points because for most of its existence, the chartered CASAC has relied heavily on panels comprised of 10 to 15 highly qualified subject matter experts with specific expertise in the pollutant under CASAC consideration. Such panels were considered indispensable to CASAC's work, due to the complex multidisciplinary analysis, integration and synthesis inherent to criteria pollutant integrated science assessments. Disbanding the PM panel on the whims of a wholly discredited former EPA Administrator is an affront to science, the federal advisory process generally, CASAC specifically, and ultimately the scientific veracity of EPA national ambient air quality criteria and standards. The loss comports with long-standing attempts at regulatory capture by a consortium of well-organized, well-funded industry groups, their lobbyists, and their consultants. Indeed, my last official day at EPA was spent in a meeting at a K street law office with industrial trade association representatives who were attempting to

circumvent the Federal Advisory Act and US Government Ethics Office regulations concerning eligibility for service on federal advisory committees, specifically the EPA Science Advisory Board and CASAC. Unfortunately, in my opinion, their efforts have been all to successful.

Having served in a science capacity at EPA under two Republican and two Democratic administrations, I have never witnessed the degree of political intrusion and decimation of the Agency's science endeavor before 2017. This is particularly egregious when it comes to external, independent, scientific advisory committees like CASAC. Elimination of the pollutant specific review panels weakens CASAC, the role of science in NAAQS criteria development, the legitimacy of air quality criteria and standards, and ultimately the protection of health and the environment for all American people. This view has been previously stated by others more experienced, knowledgeable and eloquent than I.

In a November 14, 2018 New York Times editorial, Mr. Chris Zarba, former Director of the EPA SAB Staff Office stated *"without the work of that panel [PM], it is entirely likely that the advisory committee will lack the time and expertise to provide authoritative guidance on the regulation of this pollutant."* This view was expanded upon in a letter to CASAC from three former CASAC chairs (Dr. Christopher Frey, Professor of Environmental Engineering, North Carolina State University; Dr. Jonathan Samet, Dean and Professor, Colorado School of Public Health; Dr. Ana Diez Roux, Dean and Professor of Epidemiology, Drexel University), seventeen subject matter experts, and eleven former CASAC members dated November 26, 2018. I will not reiterate their many and salient comments here. Suffice it to say that everything they say for Ozone is equally applicable to PM.

I am pleased to acknowledge, and encouraged, that on November 29, 2018 the current chartered CASAC requested Acting EPA Administrator Wheeler to reinstate the PM panel. This is an entirely appropriate request. As an independent, external advisory body, CASAC must address Agency requests. However, it is equally true that CASAC may decide to pursue any additional scientific and technical questions it deems appropriate to meet its mission as defined by its charter. That's the beauty of the Federal Advisory Committee Act under which CASAC operates. Science, not politics, is the ruling principle for any and all of your deliberations.

I thank you for indulging my request to comment before the Committee. Specific issues I would like you to consider follow.

- The chartered CASAC consists of seven scientists. Without the assistance of a PM panel to assist your deliberations, your advice and recommendations may lack the breadth and depth of previous committee reviews, diminishing the overall scientific veracity and public support of your efforts.
- The Integrated Science Assessment for Particulate Matter is exceptionally complex, as evidenced by its nearly 1900-page length. It was never intended to be reviewed solely by the seven-member chartered CASAC. In fact, its development was predicated on a review process that included the chartered CASAC, supplemented by a panel of PM subject matter experts.
- Several highly placed former EPA scientists and officials, as well as certain advocacy groups, have referred to a political/ideological war on science-based regulation at EPA

and other federal environmental agencies. The fact of the matter is, and always has been, that the external scientific community has a greater influence on science and policy within EPA than the Agency's staff scientists.

- As internal EPA scientific personnel and resources decline, it becomes exceedingly important for the Agency's external independent chartered scientific advisory committees like CASAC, to maintain the highest degree of science integrity, independence, and science advocacy they can muster.
- Without a strong CASAC supplemented with pollutant specific review panels, EPA will lose the direct and robust feedback it has traditionally obtained from the best of the scientific community. Without such input, its decisions may devolve into reliance on political expediency rather than mainstream science.
- Accordingly, I urge CASAC to take it upon itself to thoroughly review and implement the thirty recommendations provided by former CASAC subject matter experts, members, and chairs offered in their November 26, 2018 letter.
- Finally, the causality findings in the Integrated Science Assessment for suggest that: EPA consider lowering the PM_{2.5} standard in to protect public health; and that a new standard for ultrafine particles be developed. Given that PM_{2.5} causes asthma, respiratory inflammation, jeopardizes lung functions and even promotes cancers, its impact on human respiratory system should not be dismissed

Thank you for your time and attention,

Anthony F. Maciorowski, Ph.D.