

Oral Remarks to CASAC on Draft Policy Assessment for the Ozone National Ambient Air Quality Standards

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I am David Heinold an Air Quality Scientist for 41 years at AECOM, where I focus on exposure modeling and health risk assessment. I previously provided comments to CASAC NAAQS deliberations and I thank you for this opportunity to provide my views on EPA's draft Policy Assessment for ozone. My time to prepare has been supported by the American Petroleum Institute.

I have reviewed the Policy Assessment and technical information, and support EPA's preliminary policy decisions to retain the current primary and secondary NAAQS for ozone. Here are highlights from the written comments I have submitted to CASAC.

In terms of the exposure assessment, EPA adequately characterized three years (2015-2017) of population exposure for urban areas for three emission scenarios that just meet three levels of the ozone standard, 65, 70 and 75 ppb.

Hourly ozone concentrations for the three scenarios were estimated by adjusting actual measurements at eight urban areas selected to provide a wide distribution of geography, altitude, latitude, dispersion environment, sources types and population characteristics.

EPA developed and applied a refined method to adjust the measurement data on an hourly basis to simulate achieving the three levels of the standard by parameterizing the sensitivity of modeled ozone to changes in NO_x, emissions, the precursor to which ground-level ozone in the U.S. is by far the most sensitive.

Based on the adjusted hourly measurements, population exposure was then characterized using APEX to estimate ozone concentrations in various microenvironments and match them with updated activity patterns corresponding to the population distribution in each urban area.

The results of EPA's 2019 ozone exposure assessment is consistent with the level of exposure that the U.S Court of Appeals for The District of Columbia Circuit judged to be health protective in its August 2019 decision to retain the 70 ppb primary standard. The Court ruling stated that in 2015, the EPA administrator stated that a level of 70 ppb would protect the large majority of children in the urban study areas (about 96% to more than 99%) from experiencing two or more exposures at or above the 60 ppb benchmark. In a direct comparison, the 2019 exposure assessment indicates that 97.1% to more than 99.4%, of children are protected from these excursions. This comparison provides rationale to retain the primary standard.

Analyses presented by EPA indicate that that current secondary standard, which has the same level and form as primary standard, should be retained. The draft policy assessment describes the W126 index, a plant-based metric of cumulative ozone exposure during a 12-hour daylight periods during the growing season. EPA's analysis of ozone monitoring data comparing the metrics of the current primary standard and W126 shows that concentrations corresponding to current ozone standard represent a sharp transition between high and low W126 values, thus indicating the primary standard to be a viable surrogate for W126.

Also, comments from states previously submitted to EPA for the 2015 ozone standard review identify hurdles in trying to implement a W126-based standard, such as specialized methods that would need to be developed to:

- Analyze photochemical model output as well as ozone measurement data;
- Incorporate W126 into New Source Review permitting;
- Evaluate how exceptional events contribute to long-term averages; and
- Incorporate such a complex W126 standard into State Implementation Plans.

This concludes my oral remarks. Thank you again.