



# EARTH SYSTEM SCIENCES, LLC

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## PUBLIC COMMENTS TO CASAC

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**From:** Nicole Downey, Ph.D. (nicole.downey@earthsystemsciences.com)  
**To:** CASAC  
**Date:** March 9, 2012  
**Subject:** CASAC Review of EPA's ISA for Ozone and Related Photochemical Oxidants  
**Sponsored by:** BP Production Company

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Dear Members of CASAC:

I would like to begin today by thanking you for listening to, and incorporating many of the public comments you heard in January into your review of EPA's ISA for ozone. I am particularly pleased to see the suggestion for a roadmap of how the information contained in the ISA will be used in the upcoming risk and exposure assessment and policy assessment. Your suggestions to include more information about trends in ozone across wide geographical areas, and across the entire frequency distribution, along with a focus on quantifying uncertainties in estimates of background at different possible ozone NAAQS are very important. I have a few specific suggestions that I would ask you to consider before you finalize your letter to EPA.

1. It is established that modeling background ozone has its limitations, but that the current monitoring network is not capable of 'parsing out' background vs. non-background ozone. The CASAC has asked EPA to quantify the uncertainties in modeling background, with particular attention to models ability to reproduce the upper end of the frequency distribution. I would like to suggest that the CASAC panel recommends that EPA consider formulating the proposed ozone NAAQS in a manner that is consistent with these uncertainties (i.e. that the ozone NAAQS lies within the valid range of model predictions). We currently have an ozone standard

based on the 4<sup>th</sup> highest MDA8 concentration, which models have significant difficulty reproducing. It would be more appropriate to have a standard based on something that models can reliably predict.

2. On page A-4, the CASAC makes specific recommendations regarding the treatment of background, and suggests that EPA points out that this is a 'western US' problem. In my opinion, a broader view is necessary. First, depending on the range that CASAC recommends for the final NAAQS, background will be more or less important across different areas in the United States. EPA should summarize at what point (and with what averaging time) background becomes important for different areas. This analysis should be based on both modeling and monitoring data, and should take into account the known uncertainties in modeling the high end of the frequency distribution.
3. Finally, I would like to specifically address my January comments where I suggested that as we are approaching NAAQS near background, both the positive and negative health effects of emissions of criteria pollutants and their precursors should be considered. It is simply not correct to only evaluate the negative health effects of emissions, **and I am strongly in favor of defining a background emission scenario that protects public health, rather than basing background on a zero-emission scenario.** If a zero emission scenario is the target, the very real health impacts of that scenario should be taken into account. This includes eliminating emissions from the public health infrastructure, eliminating emissions from agriculture, eliminating emissions from domestic heating and eliminating emissions from the treatment and delivery of clean water. The Clean Air Act has been tremendously successful at reducing emissions of criteria pollutants in the US, and as we approach background levels for species such as ozone, a more refined approach is necessary.

Thank you very much for taking the time to consider our comments.