

10 February 2009 Dr. Donna Kenski Preliminary Review Comments on Ozone Monitoring Issues

Urban Network Design Requirements:

1. *Considering the ozone minimum monitoring requirements that are already promulgated through 40 CFR Part 58, is the considered change to these requirements sufficient to ensure a minimally adequate network in urban areas?*

I support the proposed change to require monitoring in MSAs of populations between 50,000 and 350,000, although I suggest that this requirement be tempered by an allowance to reduce monitoring if the data show little or no potential for exceeding the NAAQS. For example, if an area has a recent design value (within the last 5 years) less than 85% of the current NAAQS, the requirement for a new monitor could be waived (as Table D-2 of 40CFR part 58 App. D currently permits). Similarly, after 3 years of monitoring in these new areas, a resulting design value less than 85% of the standard should allow the states to remove or relocate the monitor in that area. The intent, as in Table D-2, is to characterize ozone concentrations in areas with significant population, but not insist on permanent monitors in areas where the data demonstrate little evidence of health impacts. In a few locations, from the map given, it looks like there are existing monitors very near the MSAs. EPA might consider substituting those on a case-by-case basis, if a state can provide supporting evidence (e.g., modeling or previous monitoring) that a nearby existing monitor can provide data that is representative of the MSA.

2. *We are considering a timeline that would require newly required ozone monitors to be operational no later than January 1, 2011, based on the expectation that final rulemaking will be completed in 2009. Is this schedule appropriate or should EPA consider providing an additional year for new monitors to be deployed (or relocated)? What would be the advantages or disadvantages of a staggered deployment schedule?*

EPA should allow the states at least a 1 year period from the time of rulemaking to the required operation of monitors. The proposed timeline seems adequate, assuming the states are allotted funding early in the process so they can make purchases of new equipment with sufficient lead time. A staggered deployment schedule might be useful for those few states with a lot of new sites (Texas?) but most states with only 2 or 3 new monitors would probably find it more efficient to make these changes at the same time; staggering deployment would unnecessarily complicate the process.

Non-Urban Network Design Requirements

1. *We are considering a new requirement that each State operate a minimum of three nonurban ozone monitors to meet certain objectives (described above). Considering the stated objectives of the non-urban ozone monitoring requirements, is three required monitors per state sufficient?*

Certainly three is sufficient for most states, but surely too many for some (RI? CT? NJ?) and perhaps not enough for others. Can there be a more equitable distribution based on area? Or better yet, could we distribute them based on where we know vegetation is sensitive, and consider the non-urban monitors that we already have? It seems somewhat heavy-handed to make a blanket requirement for every state regardless of size, existing monitors, and sensitive vegetation.

2. *What factors should be considered in the siting of ozone monitors to assess impacts on ozone sensitive vegetation in national parks, wilderness areas, and other ecosystems?*

Expected concentration and the presence of sensitive species. One might want to consider the practical aspects like ease of access to the site, collocated equipment, etc. But ozone has harmful effects on

agricultural and ornamental vegetation as well, so let's not restrict our ozone monitoring in nonurban areas to wilderness areas.

3. *In addition to the objectives that have been described for non-urban ozone monitors, what other objectives should be considered in the final network design? How would the consideration of additional objectives, if any, effect the minimum number of non-urban required monitors?*

This network really ought to consider geographic distribution without trying to parse equal numbers of monitors to each state. Plot the existing nonurban monitors (including state monitors, CASTNET and IMPROVE), find the holes, and add enough monitors to fill in the gaps. Terrain and likelihood of higher concentrations could also be factored in (we probably don't need as many monitors in North Dakota as in Texas). There's nothing inherently wrong with using some carefully modeled ozone data to estimate where highest concentrations in currently unmonitored areas might be.

4. *Current ozone monitoring regulations (described in Appendix E of 40 CFR part 58) include requirements for station and probe siting (e.g., vertical distance of inlets, set-back distances from roadways). Are these requirements (that have been developed for urban monitors) appropriate for non-urban ozone monitors? What changes, if any, should be considered?*

These non-urban monitors might be sited more like the IMPROVE monitors with respect to distance from any potential sources.

5. *We believe that States should have the option of designating that existing non-urban ozone monitors that are potentially operated by another agency (e.g., CASTNET monitors operated by the National Park Service) be utilized for meeting certain non-urban minimum monitoring requirements. What factors should States use to determine if such monitors are appropriate to include in their networks?*

These other network monitors should absolutely be considered in developing a non-urban network, and efforts toward harmonizing the various networks should continue. The presence of stable, long-term funding is probably the most important factor to consider, followed closely by an adequate quality assurance program and some kind of network intercomparison to ensure reliable, comparable data with the other state monitors.

Ozone Monitoring Season

1. *We are considering changes to the required ozone monitoring seasons based on analyses of the patterns of ozone exceedances and occurrences of the Moderate level of the Air Quality Index, during periods outside of the currently required seasons. What other factors should be considered, if any, in the determination of the length of the required monitoring season for each State?*

I wish that more information had been provided on how EPA performed this analysis. It's hard to judge whether the analysis was sufficient and what criteria were used to fix the dates of the monitoring season. With so few sites recording year round data it's unclear how representative they could be for modeling all sites; what was the geographic distribution of those year round sites? Too many unknowns here.

2. *We believe that ozone monitors that are located at NCore stations should be operated on a year-round monitoring schedule. Under what circumstances might it be appropriate to require year-round monitoring at other stations beside NCore?*

I think that the NCore sites will provide a sufficient base of year-round monitoring. Of course more data is always better, but it comes at a cost. At this point, I don't think there is sufficient added value to

expanding the pool of year-round monitors to justify the additional cost. If future health data demonstrate a pressing need for winter ozone data from additional sites, we could revisit this, but right now I don't think the need is there.

3. *We are considering that changes to the required ozone monitoring season be applicable to existing monitors beginning in 2010, one year ahead of the deployment schedule for newly required ozone monitors. Is this schedule reasonable for existing monitors?*

Yes.