LAW OFFICE OF WENDI HAMMOND
7325 Augusta Circle
Plano, TX 75025
PH: (972) 746-8540 Wendi@TexasEnvironmentalLaw.net FX: (469) 241-0430

November 9, 2009

VIA EMAIL: stallworth.holly@epa.gov
Holly Stallworth, Designated Federal Officer (DOF)
EPA Science Advisory Board (1400F)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

RE: Science Advisory Board Staff Office Notification of Public Teleconference of the Clean Air Scientific Advisory Committee (CASAC) Ozone Review Panel to be held Friday, November 13, 2009.

Dear Holly:

On behalf of the KIDS for Clean Air, the Sustainable Energy and Economic Development (SEED) Coalition, the Clean Air Institute of Texas, and myself, I am filing the following written comments on EPA's External Review Draft of the Integrated Review Plan for the National Ambient Air Quality Standards for Ozone (EPA 452/D-09-001, September 2009). These comments are for consideration at the above identified public teleconference and focus on the following chapters of the IRP: Chapter 3 – Policy Relevant Issues, Chapter 7 – Policy Assessment/Rulemaking, and Chapter 8 – Ambient Air Monitoring.

Things that should be included in the IRP for the review of the ozone NAAQS:

- Implications of the indicator,[1] averaging time,[2] level[3] and form[4] of the ozone NAAQS standard on the past and future applications of the ozone NAAQS. This includes, but is not limited to:

[1] The indicator defines the pollutant to be measured in the ambient air for the purpose of determining compliance with the standard.

[2] The averaging time defines the time period over which air quality measurements are to be obtained and averaged or cumulated, considering evidence of effects associated with various time periods of exposure.

[3] The level of a standard defines the air quality concentration used (i.e., an ambient concentration of the indicator pollutant) in determining whether the standard is achieved.

[4] The form of the standard specifies the air quality measurements that are to be used for compliance purposes (e.g., the annual fourth highest daily maximum 8-hr concentration, averaged over three years), and whether the statistic is to be averaged across multiple years.

a. Time lapse between attainment determinations and actual action to reduce ozone NAAQS violations;

b. Past air monitoring data and the implications of unusual and/or extreme weather fluctuations on attainment determinations;

c. Past and future applications in other relevant sections of the Clean Air Act, such as Title I, Part C – Prevention of Significant Deterioration of Air Quality. This includes, but is not limited:

   i. How an ozone NAAQS can be applied under 40 C.F.R. § 52.21(k).
   ii. Whether a de minimis level of ozone exists.

- The possible interaction ozone and other pollutants which results in health impacts not considered during a health impact review focused on ozone levels alone (i.e., cumulative impacts).

A. Time Delay Between Attainment Determinations and Action to Reduce Ozone NAAQS Violations

The 8-hour ozone NAAQS standard is more protective of public health over the 1-hour standard in many respects; however, the 8-hour standard unfortunately increases the time period the public must be exposed to harmful ozone levels before the public can demand action to reduce harmful ozone levels.

For example under the old 1-hour standard, the public could take action (e.g., petition for reclassification, SIP call, etc.) as soon as a single monitor registered 4 or more days of exceedances without having to wait the full three years. Thus, a NAAQS violation could be demonstrated in as little as one year regardless of the number of exceedenances that may or may not occur in the other two years. As such, the public could demand action as quickly as possible.

Unfortunately, under the current 8-hour standard, the public has no choice but to endure all three years of harmful ozone pollution. This is a serious problem for Texas, if not elsewhere, that needs to be addressed during the NAAQS review. Texas' history regarding ozone state implementation plan and attainment demonstration is replete with missed attainment deadlines, delays, and minimal action to reduce harmful ozone levels. In Texas, public participation must always spur the state (and EPA) into action to reduce harmful ozone levels.

As long as the NAAQS standard delays the time period for determining compliance with an ozone NAAQS, the time for actually attaining the ozone NAAQS standard is likewise delayed. The review of the ozone NAAQS "form" should take into consideration time period of public exposure to harmful ozone levels and the possibility of reducing any time delays for making determinations of attainment/nonattainment and taking action to reduce ozone levels.

B. Past Air Monitoring Data and the Implications of Unusual and/or Extreme Weather Fluctuations on Ozone Attainment Demonstrations

The 1997 8-hour standard removed the 1-hour standard because in theory the 8-hour standard would be as or more effective at protecting the public health. Unfortunately, air monitoring data has proven this assumption as false.

For example, during the three year period from 2009-2007, the Houston-Galveston-Brazoria area design value did not violate the 8-hour standard, but several monitors did violate the old 1-hour standard for the same time period.[5]

An explanation for this phenomenon could be attributed to the implication of unusual and/or extreme weather fluctuations. The current ozone NAAQS form (forth-highest daily maximum 8-hour concentration averaged over 3 years) was developed to supposedly account for such fluctuations. Unfortunately, the real world implication is that it compensates for fluctuations that may provide an unusually high design value, but does not compensate for fluctuations that may provide an unusually low design value.

For example, Texas experienced an unusual/extreme weather fluctuations in 2007 and 2009. In 2007, Texas experienced an unusually rainy and cool ozone season. As illustration, the Dallas-Fort Worth area—an area that typically hits triple digit temperatures throughout the summer—did not experience 100°+ temperatures until late August. Once normal ozone season weather patterns occurred, air monitors registered exceedances. Likewise, in 2009, Texas experienced an unusually windy ozone season, but again when the areas experienced typical weather patterns for ozone formation, the air monitors once again registered ozone exceedances (spiking to 157 ppm at one Houston monitor).

The review of the ozone NAAQS must somehow account for "normal" weather patterns that are conducive for ozone formation in such a way that unusual/extreme weather fluctuations do not impact attainment demonstrations in a favorable or non-favorable manner.

C. The Application of Ozone NAAQS on Other CAA Sections such as PSD Permitting

The IRP must consider the implication and application of the ozone NAAQS on other CAA sections such as the Prevention of Significant Deterioration (PSD) permitting requirements. Again, the more complicated the NAAQS, the more complicated the application of the NAAQS in other CAA provisions – arguably to the point of nullifying the application of other CAA provisions. A result EPA must avoid by law.

1. Ozone NAAQS implications on 40 C.F.R. § 52.21

While the CAA's SIP attainment demonstrations are a reactive approach to NAAQS violations, the CAA's new source review permitting provisions provide a pro-active approach to prevent additional NAAQS violations.

The FCAA's PSD permitting program provisions expressly require, inter alia, that the owner or operator of a facility subject to the PSD permitting requirements:

[5] The air monitors included regulatory monitoring sites Northwest Harris Co., C26/A110/X154 and Wallsville Road C617. State environmental data also included non-regulatory monitoring sites Crosby Library C553 and Tom Bass C558. Note: the Tom Bass monitor actually had a design value exceeding the 8-hour standard, but the site is not an EPA regulatory approved site.

> demonstrates, as required pursuant to section 7410(j) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any . . . (B) national ambient air quality standard in any air quality control region. 42 U.S.C. §7475(a)(3)(B) (emphasis added).

EPA adopted regulations to implement this statutory provision, specifically 40 C.F.R. §52.21(k) provides the following:

> Source impact analysis. The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emission increases or reductions (including secondary sources) would not cause or contribute to air pollution in violation of: (1) any national ambient air quality standard in any air quality control region; or (2) Any applicable maximum allowable increase over the baseline concentration in any area. 40 C.F.R. § 52.21(k)(emphasis added).

Almost thirty years ago, EPA created elsewhere in its regulations a presumption that generally for ozone, sources locating outside a nonattainment area will be presumed to have no significant impact on the designated nonattainment area.[6] However, recent EPA policy and data negates this "Appendix S presumption".

For example, both EPA and the Texas Commission on Environmental Quality (TCEQ) rely upon NOx reductions from within a 200 km radius from a nonattainment area. Specifically, EPA and TCEQ held that NOx reductions of 2.8 tons per day from the Alcoa plant located near Rockdale, Texas in Milam County contributes to the improvement of Dallas-Fort Worth (DFW) nonattainment air quality.[7]

However, during the PSD permitting process, TCEQ has repeatedly held that a single source emitting 2 to 6+ times more NOx (and located closer to the DFW area than the Alcoa facility) would not contribute to existing NAAQS violations.[8] The basis for TCEQ's decision is, *inter alia*, based upon: 1) its understanding that the lower range of detectability of modern ambient ozone monitors is 5 ppb, and 2) its position that ozone is dealt with not in the CAA's PSD permitting provisions, but only under the CAA's SIP provisions.

Although the public was able to present evidence of ozone contributions to an existing nonattainment area fairly easily, complications arose in presenting evidence of "causing" a new NAAQS violation. This is due to the fact that most photochemical modeling available is limited to a about 10-7 days worth of data; however, the ozone NAAQS form requires modeling three years of 4th highest data.

---

[6] 40 C.F.R. Part 51, Appendix S, Para. III.C.

[7] *See*, 71 Fed. Reg. 48870, 48875 (Aug. 22, 2006).

[8] The Oak Grove power plant located near Franklin, Texas in Robertson County (an attainment/unclassifiable area) could emit anywhere from 17.22 to 43.2 tons of NOx a day, which photochemical modeling demonstrated a potential impact of 2 ppb increase ozone in the DFW nonattainment area. Similarly, the Sandy Creek power plant located near Waco, Texas in Milam County (an attainment/unclassifiable area located almost half the distance closer to the DFW are than the Alcoa facility) would emit at least 5 tons per day of NOx and increase DFW ozone levels by at least .003 ppb on a typical ozone violation day.

Therefore, if an area currently violates the ozone NAAQS (and the area lacks an approved and current attainment demonstration), a single demonstration of increased ozone impacts suffices to show a source "contributes" to a NAAQS violation. This demonstration can usually be accomplished by utilizing available photochemical modeling data. However, if the ozone impact is in an area currently classified as attainment/unclassifiable, it is extremely difficult for the public to demonstrate whether or not a single source would "cause" a new violation because the data is limited.

2. Whether a de minimis level of ozone exists.

Currently, no federal de minimis level for ozone exists. The IRP should consider whether a de minimis level for ozone can exist for a source located in an attainment/unclassifiable area whose emissions can "cause or contribute" to an existing or new NAAQS violation downwind, especially a source located within the 100 km radius for VOC and/or 200 km radius for NOx.

D. Health Impacts of Ozone Interaction with Other Pollutants (i.e., Cumulative Impacts)

The IRP should consider data about possible adverse health impacts resulting from the interplay of ozone with other pollutants.

A 2004 Yale study[9] found that every 10-part-per-billion surge in ozone was followed by an average 0.52 percent jump in mortality the next week. Surprisingly, Dallas, Texas had one of the most profound effects, with about 1 percent more people than expected dying with every 10-part-per-billion increase in ozone. Only four other cities were higher. Cities notorious for their air pollution, such as Houston and Los Angeles, actually had fewer ozone-associated deaths than Dallas, according to the government-financed study. Explaining these differences - why ozone may be deadlier in Dallas than Dayton – was to be fodder for future research.

At the time, it was determined to probably not a result of Dallas' heavy ozone in general, since a 10-part-per-billion increase is a 10-part-per-billion increase, whether it occurs in Dallas, Houston or Los Angeles. Dr. Schwartz said the new data may be useful the next time the Environmental Protection Agency considers setting standards for ozone.

Conclusion

Thank you for your attention to this matter. If you have any questions, feel free to contact me.

Sincerely,

Wendi Hammond

[9] "Ozone and Short-term Mortality in 95 US Urban Communities", JAMA, November 17, 2004 – Vol. 292. No.19.