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Air and Radiation Docket and Information Center
U.S. Environmental Protection Agency
401 M Street, SW
Room M-1500 (Mail Code 6102)
Washington, DC 20460

RE: **Docket No. A-2000-28**
Comments on the Implementation of the 8-hour Ozone NAAQS

Dear Docket Clerk:

Attached to this letter you will find the comments of the American Petroleum Institute (API) in response to the Environmental Protection Agency (EPA) sponsored public meetings on implementation of the 8-hour ozone NAAQS. API appreciates the opportunity to provide input to EPA in regards to its upcoming proposal on the subject. API is a national trade association with over 400 companies involved in all aspects of the oil and natural gas industry. As API members' facilities and products factor heavily in ozone attainment strategies, our members have a vested interest in appropriate implementation of the ozone NAAQS.

In implementing the 8-hour ozone standard, API urges EPA to consider the following:

- API supports use of a flexible approach that allows use of tailored control strategies, as in Title I, Part D, Subpart 1 of the Clean Air Act (CAA), while acknowledging the need for extended timeframes to attain the standard, as in Subpart 2.

- Attainment area designations should be based on 8-hour design values within the designated area. Further, while upwind areas that contribute significantly to downwind non-attainment should be required to institute measures to mitigate significant impacts on downwind areas, this should not affect the upwind area's attainment designation. A separate demonstration is needed for upwind areas to address how control measures will mitigate downwind areas' ability to attain the standard.

- Control measure strategies for ozone and fine particulate matter ($PM_{2.5}$) should be coordinated to the extent possible.

- While API recognizes the need for metrics to gauge progress toward ozone attainment, we caution that the relationship between precursor emissions and ambient ozone concentrations is complex, and non-linear. This must be taken into account when developing area-specific milestones to track progress towards attainment with the ozone

standard. Further, EPA should acknowledge the limitations inherent in models used to predict 8-hour attainment.

These issues are addressed in greater detail in the attached comments. Please feel free to contact me at (202) 682-8314 with any questions or comments you have regarding these comments or other NAAQS related issues.

Sincerely,

Kyle B. Isakower

Comments of the American Petroleum Institute
On Implementation of the 8-Hour Ozone NAAQS
June 11, 2002

Introduction

Based on recent research, the 8-hour ozone National Ambient Air Quality Standards (NAAQS) may not be attainable in many urban areas of the U.S., regardless of the implementation strategy adopted. Furthermore, it is difficult to imagine how the provisions of the Clean Air Act (CAA) Title I, Part D, Subpart 2, which were written to apply to the 1-hour ozone standard, can be blended with the generic provisions of Subpart 1. Both Subparts 1 and 2 were written under the assumption that if those provisions were adhered to, the standards would be attained. We now know that reducing ozone concentrations is far more complex and difficult than adhering to the reduction requirements and timelines of either Subpart 1 or 2. Accordingly, API supports a flexible, pragmatic approach to implementation of the 8-hour ozone NAAQS that promotes reduction strategies that are, in fact, effective in moving toward attainment of the 8-hour NAAQS. At the same time, EPA should adhere to the fundamental Congressional intent of allowing extended timeframes under Subpart 2 to come into attainment for areas that are the farthest out of attainment from either the 1-hour or the 8-hour ozone NAAQS.

Area classifications should be based on 8-hour ozone NAAQS design values. As EPA has recognized, there can be multiple 8-hour design values for areas sharing the same 1-hour design value. While the overall framework of five levels of non-attainment (NA) contained in Subpart 2 may continue to make sense for 8-hour NA areas, the prescriptive control requirements do not. Many of these controls have already been implemented and have failed to bring about universal attainment with the 1-hour standards due to ineffectiveness of the controls for the area in question. States should be encouraged to develop control strategies designed to achieve attainment with the 8-hour standard and retain the control strategies delineated in Subpart 2 *only to the extent that* States can demonstrate such measures are effective in promoting attainment of the 8-hour standard or that such strategies are needed to prevent backsliding.

API supports the concept of addressing transport issues in SIPs on a regional basis to ensure that needed control measures are put in place to allow downwind areas to come into attainment. However, to be meaningful, when such a need is demonstrated, the attainment designation of individual upwind areas should continue to be based on air quality in those upwind areas. This does not negate the need for upwind areas to adopt controls specifically designed to mitigate any significant influence on the ability of receptor areas to attain the standards.

Attainment Area Designations and Boundaries

Attainment area designations should be based on air quality within the designated area. Controls should be determined based on attainment and maintenance of the 8-hour standard, not on an arbitrary list of control mechanisms that may or may not lead to attainment in a given area. Control measures that are required under Subpart 2 should be retained *only to the extent that* States demonstrate that the control measures are needed to 1) attain or maintain the 8-hour standard and 2) prevent backsliding.

Area classifications should be based on the 8-hour ozone NAAQS design values, not the 1-hour design values, since the 8-hour standard is by definition a more stringent standard and is the standard to be achieved. EPA has recognized that there can be multiple 8-hour design values for areas sharing the same 1-hour design value, or as in the case of the San Francisco Bay Area, an area may attain the 8-hour standard but be classified as NA for the 1-hour standard. Attainment strategies for the 8-hour standard must be determined independently of the 1-hour design values and area designations.

Transition from 1-hour to 8-hour Ozone NAAQS

As EPA moves to replace the 1-hour standard with the 8-hour standard, States must be required to determine whether the controls required under Subpart 2 for meeting the 1-hour standard are needed to attain the 8-hour standard. Subpart 2 controls should not be required if they do not promote or actually interfere with attainment of the 8-hour standard.

In general, API supports implementation strategies based on the more flexible provisions of Subpart 1, which allow EPA and the States to tailor control strategies to promote attainment of the 8-hour standard, as opposed to the rigid provisions of Subpart 2, which prescribe specific control measures without regard to whether they actually promote attainment in a given area.

With regard to the timing for transition from the 1-hour standard to the 8-hour standard, EPA should bear in mind that not all reductions that are effective in leading to attainment of the 1-hour standard will be effective in leading to attainment of the 8-hour standard. States should not be required to continue to move toward attainment of the 1-hour standard if this will not simultaneously result in progress toward attainment of the 8-hour standard. For these reasons, API supports transition to the 8-hour NAAQS at the time of area designation, provided the transition process recognizes that 1-hour NA areas are likely to need more years to attain the 8-hour standard (if they are able to attain it at all) than are provided by the timelines in Subpart 1.

Options for Attainment Dates for the 8-hour Standard

The overriding guiding principle here is that areas in NA for the 1-hour standard must not be required to come into attainment on a faster time schedule than Subpart 2

dictates. Furthermore, these same areas must not be required to attain the *8-hour* standard in the same or a shorter timeframe than Subpart 2 would require them to attain the 1-hour standard. Congress provided 1-hour NA areas additional time to attain the 1-hour standard in recognition of the difficult task these areas faced. Both the D.C. Circuit and the Supreme Court recognized that this Congressional intent must be honored.

EPA must carefully consider, however, how to address areas currently in attainment for the more stringent 8-hour standard but in NA for the 1-hour standard, such as the San Francisco Bay Area, where it may not make sense to require attainment of the 1-hour standard. (See discussion in previous section.)

API supports 8-hour implementation based on the more flexible provisions of Subpart 1, which allow EPA and the States to tailor control strategies to promote attainment of the 8-hour standard, as opposed to the rigid provisions of Subpart 2, which prescribe specific control measures for 1-hour NA areas without regard to whether they actually promote area 1-hour attainment, let alone 8-hour attainment. If Table 1 in section 181 of the CAA is used as a framework for the 8-hour NA categories, the design values for each category should be based on 8-hour NA design values. However, as discussed above, control measures should be required only to the extent that States demonstrate they are needed to prevent backsliding or to attain or maintain the 8-hour standard.

API supports the concept of a mid-course review in 8-hour ozone and $PM_{2.5}$ NA areas. As part of this approach, regulators need to be certain that burdensome control strategies actually are achieving the goal of attaining the standard. This will become increasingly important as new data and modeling become available. Strategies need to be reviewed to determine which controls are working and should be continued. As discussed below, mid-course reviews can only be effective where sufficient data has been collected to ensure meaningful monitoring results and modeling analyses. Also, mid-course reviews must be timed to allow for the impacts of reduction strategies to be demonstrated. We recommend that EPA consider the flow diagram and associated discussion on how to conduct a mid-course correction contained in the Ozone/PM/Regional Haze FACA Reasonable Further Progress document to develop guidance for mid-course corrections.

As recent work by Reynolds and Blanchard on the technical feasibility of attaining the 8-hour ozone standard shows, there are a number of problems presented by the current use of modeling to demonstrate attainment (a Power Point presentation of this work is available on EPA's 8-hour implementation website). More than a few peak episodes must be analyzed for modeling to be reliable in providing guidance for developing strategies that lead to attainment. Modeling must be capable of demonstrating how *different* episodes respond to precursor reductions for the entire 8-hour ozone season. The lack of sufficient databases within many areas of the country makes reliable predictive modeling impossible. As noted in the NARSTO State of Science reports, particularly the one addressing modeling, and the NARSTO "An Assessment of Tropospheric Ozone Pollution" report, many areas lack sufficient

databases for modeling and evaluating model performance. API strongly urges EPA to require -- and to assist -- States in developing adequate databases.

Lack of sufficient data results in significant uncertainties in model assessment, including uncertainties in delineating the appropriate precursor(s) for sub-regions within a modeling region, which may be episode dependent, as well as uncertainties in data analyses of the modeling results. Accordingly, API recommends that EPA require States to submit plans to enhance their monitoring networks to make available the air quality data and meteorological data needed to meet the demands of predictive modeling and data analysis. Comments addressing enhanced monitoring networks have already been submitted to EPA and are found on EPA's 8-hour implementation website.

Integration of Designations and Controls for Ozone and $PM_{2.5}$

Since the two programs will address many of the same precursors, EPA should encourage regional coordination of ozone and $PM_{2.5}$ control measure planning among the States. However, States should handle timeframes for achieving each standard independently as different statutory and regulatory provisions apply to ozone and PM. Congress recognized the need to postpone area designations for $PM_{2.5}$ when it enacted the Transportation Equity Act for the 21st Century (TEA-21) with specific provisions for developing a nationwide monitoring network for fine particles and set requirements for area designations for $PM_{2.5}$.

As noted, the single largest impediment to integrating control strategies for the ozone and PM NAAQS is the lack of data for both ozone and PM modeling. Ozone modeling outputs, including predicted precursor and oxidant concentrations, provide input for PM modeling. If these are incorrect, or if the ozone model performance is inadequate, then the accuracy of the PM modeling is negatively impacted. Another impediment is that high 24-hour PM concentrations, which can impact both the 24-hour and annual $PM_{2.5}$ standards, do not necessarily occur concurrently with high ozone concentrations. At present, few areas have modeling databases that can be used to carry out adequate planning for both ozone and PM. In addition to the need for more data to determine how ozone strategies will affect the highest 24-hour concentrations, data is needed to show how seasonal concentrations of ozone impact seasonal levels of PM.

Transport

EPA's July 1998 policy for extending attainment dates for downwind transport areas should be extended to the 8-hour standard. Downwind areas should be allowed attainment date extensions for exceedances due to transport from upwind areas. Controls to address transport issues should be justified by analyses on a regional basis, as was done in the NOx SIP Call, without penalizing upwind areas by imposing controls unrelated to, or detrimental to, achieving attainment in downwind areas or by changing the designation of upwind areas.

Guidance for 8-hour Attainment Demonstrations

Despite the controls that have been required under Subpart 2 for 1-hour NA areas, many areas have not been able to meet the 1-hour ozone NAAQS; the 8-hour standard is expected to be even more difficult to attain, even with extended timeframes for attainment.

As discussed above, API is concerned with the present use of models for demonstrating attainment. The NARSTO "An Assessment of Tropospheric Ozone Pollution" document cited earlier states that despite 20 years of improvement, these models still contain significant limitations. The models were never intended to be used as an absolute (deterministic) predictor of ozone concentrations. This limitation is acknowledged to some extent by EPA's draft ozone modeling guidance through the use of relative reduction factors, but further work is needed. As noted above, multiple episodes should be examined. The modeling should predict which precursor would be most effective, both temporally and spatially, over an ozone season. Of course, the weight of evidence approach should also be used in 8-hour SIPs.

As a separate issue to be considered in addressing attainment demonstrations, we urge EPA to address transport issues separately from other attainment issues, so that there are essentially two attainment demonstrations, one for the air quality of the area itself and a separate one for demonstrating that regional controls will contribute significantly to downwind attainment. As discussed above, upwind areas that contribute significantly to downwind NA areas should be required to institute measures to mitigate their impact on downwind areas on a regional basis as done in the NOx SIP Call, but this should not affect the upwind area's attainment designation. A separate demonstration is needed for upwind areas to address how control measures will mitigate downwind areas' ability to attain the standard.

RFP Requirement Under the 8-hour Standard

We recognize the need for and concur with milestones that require real reductions of relevant precursors, coupled with midcourse corrections to ensure that the milestones are appropriate. It may not always be possible for all NA areas to continuously reduce ozone concentrations and NA areas must not be penalized where this is the case. At the same time, it is not necessary, nor even desirable, for RFPs to be linear in meeting attainment milestones. Some measures are front-end loaded, while others are more evenly spread over the relevant time period. The options EPA has presented need to address this important point. At present, the options only look at areas that are not in attainment for the 1-hour standard, and assume that these areas will be addressed under Subpart 1, while leaving other areas subject to Subpart 2 mandated controls. This does not make sense. All 8-hour NA areas should be allowed the flexibility of Subpart 1 controls tailored to meet the 8-hour standard, subject to backsliding concerns. An important part of this approach is for States to choose the most appropriate precursor to reduce, taking into consideration data analysis of episodes and the response of sub-regions to precursor reduction.

The baseline year for emissions, for the purposes of counting reductions, should be the most recent year that makes sense. However, reductions that have yet to be made, but which are contained in existing SIP demonstration, need to be credited.

Conclusion

In developing an implementation policy for the 8-hour ozone NAAQS, EPA should realize that it will be nearly impossible to follow the instructions of the Supreme Court in the Whitman case, promulgate an implementation program that results in nationwide attainment in a timely matter, does not impose failed reduction strategies, and does not result in widespread challenges to its final policy. Consequently, EPA should strive to develop a pragmatic program that, to the extent technically and legally feasible, promotes attainment of the 8-hour NAAQS over a realistic period through the use of ozone reduction strategies demonstrated to be effective.