

A.Q. Staff Proposal for Implementation of the 2010 Ozone Standard

The CAPCOG Air Quality staff, disagrees with the proposal put forward by the United States Environmental Protection Agency (EPA) to implement the 2010 primary ozone standard under Part D, Subpart 2 of the Clean Air Act (CAA) for nonattainment areas with eight-hour design values that are not exceeding 0.09 parts per million (ppm). The CAPCOG Air Quality staff would rather that EPA only use Subpart 2 to implement the 2010 primary ozone standard for areas exceeding 0.09 ppm, as the United States Court of Appeals for the District of Columbia required in *South Coast Air Quality Management District v. EPA* (2006), and implement the standard under Subpart 1 for all other areas as allowed by the court in the *South Coast* decision. The CAPCOG Air Quality staff believes that Subpart 1 implementation of the 2010 primary ozone standard would not only be legally permissible, but would also allow for more effective air quality planning, more effective control strategy development, and more equitable distributions of the burdens for reducing air pollution.

Legal Authority for Subpart 1 Implementation

Supreme Court Ruling in *Whitman v. ATA*

In *Whitman v. American Trucking Associations* (2001), the Supreme Court held that “to the extent that the new ozone standard is stricter than the old one...the classification system of Subpart 2 contains a gap, because it fails to classify areas whose ozone levels are greater than the new standard (and thus nonattaining) but less than the approximation of the old standard.” Furthermore, the court held that “these gaps in Subpart 2’s scheme prevent us from concluding that Congress clearly intended Subpart 2 to be the exclusive, permanent means of enforcing a revised ozone standard.” The approximation that the court was referring to was the EPA’s statement in the final 1997 eight-hour ozone National Ambient Air Quality Standard preamble that an 8-hour standard of 0.09 ppm would have “generally represent[ed] the continuation of the [old] level of protection.” (62 FR 38858)

United States Court of Appeals for the District of Columbia Circuit Ruling in *South Coast Air Quality Management District v EPA*

In *South Coast Air Quality Management District v. EPA* (2006), the DC Circuit Court of Appeals held that “the gap identified in *Whitman* affords EPA discretion only to the extent that an area is nonattaining but its air quality is not as dangerous as the level addressed by the 1990 Amendments, which now translates to 0.09 ppm on the eight-hour scale,” and that “eight-hour nonattainment areas must be subject to Subpart 2 wherever they have air at least as unhealthful as Congress contemplated when enacting the 1990 Amendments.” Moreover, the court found that the *Whitman* decision “forecloses” the contention that the Clean Air Act “does not support any ozone nonattainment areas being regulated exclusively under Subpart 1.”

Possible Interpretations of South Coast Requirement

Based on the South Coast decision, EPA has two possible options for interpreting the eight-hour design value cut-off above which Subpart 2 implementation is mandatory. Subpart 2 could be required for areas with eight-hour design values above either 94 parts per billion (ppb) or 90 parts per billion, depending on the interpretation of the decision. Since areas need 8-hour design values to exceed 84 parts per billion in order to be violating the 0.08 ppm ozone NAAQS, presumably, areas would have needed 8-hour design values to exceed 94 parts per billion in order to violate a 0.09 ppm standard.

The alternative interpretation of mandatory Subpart 2 implementation for areas with eight-hour ozone design values exceeding 90 parts per billion would be consistent with the Subpart 2 classification scheme, whereby areas with design values of 121 ppb and higher were considered nonattainment for the 0.12 ppm one-hour standard. Since the 2010 primary ozone standard uses the same indicator, averaging time, and form, the same cut-point should apply.

Based on the 2009 ozone design values, the only areas where the EPA would be required to use Subpart 2 under either of these interpretations would be Los Angeles, the San Joaquin Valley, Sacramento, and Riverside, which are all in California. In allowing the State of California to set their own automobile emissions standards, Congress has already acknowledged that California has unique air quality problems. The EPA need not use Subpart 2 for the whole country when they are only required to use it for one state.

Subpart 1 Implementation Compared to Subpart 2 Implementation

While the courts held that the EPA must use Subpart 2 if the eight-hour design value is above 0.09 ppm, it specifically held that the EPA was *not* required to use Subpart 2 if the eight-hour design value was at or below 0.09 ppm. However, even if EPA believes that Subpart 2 offers it additional tools with which to implement the standard, there is nothing that EPA couldn't require under Subpart 1 that Congress didn't require under Subpart 2. The difference is that if EPA chooses to implement the standard for all areas under Subpart 2, it is preventing itself from using the discretion available to it under Subpart 1.

Classifications and Attainment Deadlines

Under §172(a)(1), the EPA “may classify [a nonattainment area] for the purpose of applying an attainment date pursuant to paragraph (2), and for other purposes,” except that “this paragraph shall not apply with respect to nonattainment areas for which classifications are specifically provided under other provisions of this part.” Therefore, the EPA, if it chose to do so, could even use the subpart 2 ozone classification scheme as the basis for setting major source thresholds, new source review offset requirements, and more. The difference, though, is that if EPA implements under Subpart 2, it has no ability to adjust those requirements, which were designed to control one-hour ozone concentrations in excess of 0.12 ppm but may not be fully appropriate to address eight-hour ozone concentrations of 60-70 ppb. Under §172(a)(2), Subpart 1 also provides for substantial flexibility for the EPA to set appropriate attainment deadlines anywhere from five years after designation to ten years after designation.

Attainment Demonstrations

One of the key differences between Subpart 1 and Subpart 2 is that areas classified as Marginal under Subpart 2 are not required to submit attainment demonstrations since their attainment deadlines correspond to the submission date for plans. Since all nonattainment areas would require an attainment demonstration under Subpart 1, planning agencies are required to actually do planning for areas that might otherwise be classified as Marginal. Consider the effectiveness of Marginal compared to Subpart 1: 44% of all areas classified as Marginal for the 1997 eight-hour ozone standard missed their attainment deadlines, whereas only 10% of areas subject to Subpart 1 missed their deadlines. Classifying areas as Marginal rather than Subpart 1 prevents the EPA from ensuring that the many areas that would fall into a Marginal classification would actually be able to attain the standard by the attainment deadline. While attainment demonstrations require more resources from local, state, and federal agencies, by requiring the agencies to actually conduct such planning, they provide a more prudent means of ensuring that air quality standards are met than by simply leaving it up to chance for areas classified as Marginal.

Reasonable Further Progress

Another key difference between Subpart 1 and Subpart 2 are the requirements for reasonable further progress (RFP). Under Subpart 1, (§171(1)) RFP is defined as “such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date.” Under Subpart 2, RFP is defined as achieving at least a 15 percent reduction in emissions of volatile organic compounds (VOC) within 6 years of nonattainment designation and specific annual reductions in emissions of VOC and nitrogen oxides (NO_x) as necessary for attainment of the national ambient air quality standard for ozone by an area’s attainment date (§182(b)(1)(A)), and an additional 3 percent per year in reductions of either VOC or NO_x or both in the 7th year after designation and beyond until attainment. Under Subpart 2, RFP plans are not allowed to take credit from pre-1990 controls or mandated controls, and reductions are required to come from within the nonattainment area.

The RFP requirements of Subpart 2 are a very blunt instrument with which to achieve progress towards attainment. These requirements were put in place in the context of a one-hour ozone standard, which was much more closely linked to local VOC emissions within the nonattainment area. By restricting the emissions reductions to the boundaries of the nonattainment area and requiring that a minimum of 15% VOC-only reductions were made from within the area, Subpart 2 is not well-suited to eight-hour ozone nonattainment in many locations. Most areas in Texas, including the Austin Area, are heavily affected by ozone transport, and modeling and data analysis have shown that NO_x reductions are about twice as effective as VOC reductions in reducing ozone. Forcing areas to achieve 15 percent reductions in local VOC emissions with no analysis as to how effective those reductions would be at reducing local ozone concentrations doesn’t make sense. The reasonable further progress requirements should be pegged to the attainment demonstration, as they are under Subpart 1.

Under Subpart 2, states are also supposed to submit compliance demonstrations within 90 days of an RFP milestone in order to ensure that areas are meeting their emissions reduction targets. Since assessing emissions inventory for a given year takes substantially longer than 90 days, this requirement has been ignored up to this point. However, Subpart 1 provides enough flexibility that a similar compliance demonstration could be required, except the timing could be more appropriate to the nature of emissions inventory development. For instance, if 2011 is the baseline for a given area with an attainment deadline of 2016 under Subpart 1, the EPA could use the state's annual submission of point source emissions data and tri-annual emissions inventory in order to assess compliance with progress requirements with enough to issue notice to the state that it has not made adequate progress.

Finally, whereas all areas are required to demonstrate RFP under Subpart 1, Marginal areas are specifically exempted from RFP requirements. Since Marginal areas are not required to submit any plans at all, the EPA has no way of assuring that they will in fact make the progress needed to attain the standard.

Reasonably Available Control Measures and Reasonably Available Control Technology

Under §172(c)(1), all state implementation plans for nonattainment areas must provide for reasonably available control measures (RACM), reasonably available control technology (RACT), and attainment of the national ambient air quality standards. Under Subpart 2, Marginal areas are exempt from either of these requirements. The RACM requirement is otherwise identical under both Subpart 1 and Subpart 1. The RACT requirements under Subpart 2 are much more specific, however. States are required to implement reasonably available control technology for each category of VOC sources covered by a control technique guideline issued by the EPA before the area's attainment deadline and "major sources" of VOC and NO_x. Under Subpart 2, the "major source" threshold is 100 tons per year for Moderate areas, 50 tons per year for Serious areas, 25 tons per year for Severe areas, and 10 tons per year for Extreme areas. Just as the EPA considered adopting RACT requirements for Subpart 1 areas similar to the Subpart 2 RACT requirements in Phase II of the 1997 Eight-Hour Ozone Standard Implementation rule, the EPA could similarly use the Subpart 2 RACT requirements for areas covered under Subpart 1, using the an area's design value to specify the major source threshold.

Other Control Measures

Both Subpart 1 and Subpart 2 require states to adopt any other control measures beyond RACT and RACM that would be needed to achieve attainment or make reasonable further progress. Subpart 2, however, specifies the following mandatory control requirements for areas:

- Moderate
 - Basic inspection and maintenance (I/M) program
- Serious
 - Stage II vapor recovery
 - Enhanced I/M program

- Clean fuels program
- Transportation control measures
- Severe
 - VMT growth offsets
- Extreme
 - Clean fuel requirements for boilers
 - Traffic controls during congestion

While these mandatory controls may have been useful in bringing one-hour ozone levels down after the 1990 Clean Air Act Amendments, automobile technology and EPA's own automobile standards have rendered several of these measures (including the Stage II vapor recovery and Clean fuels program) obsolete, and has rendered mandatory, area-wide I/M requirements highly inefficient in reducing emissions. Since the EPA already has the authority under Subpart 1 to classify areas for any relevant requirements, it seems to make more sense for EPA to issue its own guidelines or requirements for control measures, rather than reverting to 20-year-old requirements that are not very relevant to current ozone problems.

Contingency Measures

Subpart 1 requires states to adopt contingency measures for failure to attain a NAAQS by its attainment deadline or for failing to make reasonable further progress. This requirement applies to all areas designated nonattainment, including all Subpart 2 areas except for Marginal areas. Subpart 2 also requires areas classified as Serious to adopt milestone contingency measures, and requires major sources in areas classified as Severe or Extreme to pay pollution fees if the area fails to attain by its attainment deadline. The "milestone" contingency requirement simply requires areas to adopt a contingency measure for an intermediate milestone, which is consistent with the Subpart 1 requirement. The failure-to-attain fees are mandatory under Subpart 1, but the EPA could also require such contingency measures under Subpart 1 if it chose.

Permitting

Under Subpart 1 (§172(c)(5) and §173(a)), all new source review permits for nonattainment areas would still require offsets of at least 1:1 (or higher, if the EPA chose), the lowest achievable emission rate (LAER), and almost all of the other requirements that are also applicable under Subpart 2. The main differences are that Subpart 2 has tiered major source thresholds and offset ratios, and that Subpart 2 has special NSR requirements for existing source modifications. Nothing in Subpart 1 prevents the EPA from using the same tiered system, and in fact, the ability of the EPA to classify areas under Subpart 1 suggests that Congress specifically considered just this kind of system.

The Merits of Subpart 1 Implementation

Subpart 1 implementation of the 2010 primary ozone standard is preferable to Subpart 2 implementation because it provides greater flexibility in planning, an optimal use of scarce resources to reach attainment, greater assurance of attainment, options for longer-range planning, and more equity in controlling emissions.

Since Subpart 1 does not contain the highly prescriptive requirements of Subpart 2, the most problematic of which in the CAPCOG Air Quality staff's opinion are the I/M program requirement and the RFP requirements, it will provide more careful analysis of the effectiveness of strategies. These and other measures in Subpart 2 were designed to address peak one-hour concentrations of ozone, and are not necessarily effective at reducing eight-hour ozone concentrations at half the level of the one-hour standard 20 years later. It is worth noting that the final attainment deadline contemplated by Congress in the 1990 Federal Clean Air Act Amendments, November 15, 2010, has now passed. As the courts have stated, the EPA is not required to implement the 2010 ozone standard for all (or even most) areas of the country under the cumbersome Subpart 2. Subpart 1 implementation will allow the EPA, the states, and local authorities the opportunity to more closely focus on what strategies will be needed for attainment, rather than spending valuable resources (including staff time) fulfilling requirements that may or may not be valuable or effective in attaining the standard.

Since implementation under Subpart 1 would require states with areas that would otherwise be classified as Marginal to submit attainment demonstrations and adopt RACM, RACT, and contingency measures for these areas, none of which is required under Subpart 2 under the Marginal classification, it would provide a greater degree of assurance that these areas will attain the standard in an expeditious manner. While the attainment deadline for Marginal areas would be earlier than the maximum allowable attainment deadlines under Subpart 1, there are no assurances that Marginal areas will attain by their date at all, other than NSR requirements. Given the role of transport in eight-hour ozone concentrations at these levels, Marginal classifications seem to set areas up for failure. If EPA decides to implement under Subpart 2, the CAPCOG Air Quality staff requests that the EPA abandon the Marginal classification altogether or provide states with the opportunity to implement either under a Marginal classification or under Subpart 1.

Since Subpart 1 provides the EPA with the option of extended areas' attainment deadlines from five years after designation to ten years after designation, Subpart 1 provides a unique opportunity for states to engage in coordinated and long-range planning consistent with the explicit intent of Congress for EPA to consider the availability of control measures in setting attainment deadlines. Extending the mandatory attainment deadlines to ten years would not prevent expeditious attainment of the NAAQS, as states would still be required to adopt RACT and RACM for all nonattainment areas. It would, however, provide air quality modelers with the opportunity to avoid the costly task of modeling multiple attainment years, so that air quality agencies could focus on implementing the kind of long-range control measures that will be most effective at reducing ozone pollution in all nonattainment areas.

Finally, Subpart 1 provides a greater measure of equity in air quality planning. Since transport plays a large role in ozone at the levels of this standard, it is important to ensure that all areas that are contributing to ozone standard violations are reducing their emissions in a coordinated fashion. In Texas, as in many other areas of the country, emissions and ozone levels in one nonattainment area are likely to affect ozone in other nonattainment areas. For an area like Houston to be given, say, 15 years to attain the standard, but to give Austin only 6 does not provide for optimal or efficient planning. Such a situation would mean that Austin, which only contributes 10-20% of the local ozone levels, would have to adopt many costly measures in order to attain the standard 9 years earlier than the Houston area, but if the areas had simultaneous attainment deadlines, control measures required for the Houston area to attain could be used to help the Austin area attain the standard too. Subpart 2 provides no such remedy. If all areas (except the Subpart 2 areas) were required to attain the new standard within ten years, it greatly simplifies the planning requirements and avoids over-penalizing areas with less severe air quality problems. EPA's own modeling shows that most areas can reach attainment by 2010 without substantial new controls. To unnecessarily accelerate that deadline is unfair to areas like Austin that are being heavily impacted by ozone transport. Since the courts have held that the ozone transport policy adopted by the EPA in the 1990s was not valid under Subpart 2, hopefully the EPA sees that Subpart 1 provides the best means for addressing the equity problems caused by ozone transport.

Proposed Implementation and Classification

The CAPCOG Air Quality staff proposes that EPA explicitly designate and classify areas nonattainment under Subpart 2 only if their 2010 eight-hour ozone design value is 91 ppb or higher, and to explicitly designate and classify areas nonattainment under Subpart 1 if their 2010 eight-hour ozone design value is 90 ppb or below but above the standard. The CAPCOG Air Quality staff proposes that the EPA translate thresholds in Table 1 in §181(a) of the CAA in the following manner: lower the ratios by 50 percent of the increase that would otherwise be used:

- Marginal/Moderate Threshold: 115% of the NAAQS in Table 1 => 107.5% of the 2010 NAAQS
- Moderate/Serious Threshold: 133.333% of the NAAQS in Table 1 => 116.667% of the 2010 NAAQS
- Serious/Severe 15 Threshold: 150% of the NAAQS in Table 1 => 125% of the 2010 NAAQS
- Severe 15/Severe 17 Threshold: 158.333% of the NAAQS in Table 1 => 129.167% of the 2010 NAAQS
- Severe 17/Extreme Threshold: 233.333% of the NAAQS in Table 1 => 166.667% of the 2010 NAAQS

For Subpart 2 areas, all of the relevant requirements for these classifications would apply. For Subpart 1 areas, the EPA could use the Subpart 2 classifications and the thresholds listed above to set major source definitions and NSR requirements. All areas would be required to adopt RACM and RACT. Given the role of ozone transport and the degree of emissions controls already achieved nationwide and

within existing nonattainment areas, the EPA should set the attainment deadline at ten years from designation for all Subpart 1 areas. The RFP requirement could be met by showing the following:

- At least 60% (net of growth) of all of the reductions required in the attainment demonstration will be achieved by the beginning of the 2017 ozone season
- At least 90% (net of growth) of all of the reductions required in the attainment demonstration will be achieved by the beginning of the 2020 ozone season
- Use either a 2008 or 2011 baseline inventory

Each state's PEI and annual point source emissions inventories can be used to monitor compliance with reasonable further progress requirements.

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