

Response to Comments for Birmingham, Alabama, 1-hour Ozone Attainment Demonstration-Motor Vehicle Emissions Budget (MVEB) for Transportation Conformity Purposes-Adequacy Demonstration

1. COMMENT: The Birmingham SIP Does Not Demonstrate Attainment by 1993.

An EPA finding of the MVEB as “adequate” for transportation conformity purposes based on the submitted attainment demonstration would, de facto, grant the Birmingham region an attainment date extension. Such a finding is not consistent with law. Concluding that petitioners had a substantial likelihood of prevailing on the merits of their claim that an attainment date extension was illegal, the 11th Circuit Court of Appeals, in Georgians for Transportation Alternatives, et al. v. U.S. Environmental Protection Agency, Civil Appeal No. 00-012187-A, ordered a judicial stay of EPA’s approval of the Atlanta region MVEB. The issues in that case are identical to those confronted here. In that case, petitioners presented exhaustive argument objecting to EPA’s extension of an attainment date without clear statutory direction. Those objections are incorporated herein by reference.

The result of this policy is to postpone the public health protection that could and should be provided by an increasing number of emission controls required to be implemented in the Birmingham region by 1993, 1996 and 1999 - not 2003. Congress has granted EPA no discretion to postpone these emission reduction obligations and the appropriate remedy is for the Administrator to fulfill her statutory duties under CAA §182(b)(2)(B), publishing notice of failure to attain the NAAQS and identifying the reclassification category. Nevertheless, the MVEB derived from an unapprovable plan for a region that has failed to demonstrate attainment by its original statutory deadline, or by the statutory deadlines of the two next higher nonattainment area classifications, cannot legally be determined adequate for the purpose of transportation conformity.

Response:

This comment raises two issues: 1.) Whether EPA provided Birmingham an extension of its statutory 1-hour ozone attainment date and, 2.) Whether EPA failed to reclassify the Birmingham ozone nonattainment area from “marginal” to “moderate” or “serious.” The Birmingham area, comprised of Jefferson and Shelby Counties, was designated as nonattainment for 1-hour ozone on March 3, 1978, and a marginal ozone nonattainment classification was made on November 15, 1991. The State was to attain the standard by November 15, 1993. Alabama had three years of air monitoring data (1991, 1992, 1993) which demonstrated that the ozone standard was attained. In accordance with the Clean Air Act, the State submitted a State Implementation Plan (SIP) demonstrating attainment and a redesignation request on March 16, 1995. A direct final rule to approve the redesignation request was signed by the EPA Regional Administrator and forwarded to the Office of Federal Register on August 15, 1995, for publication. Just prior to publication, the Birmingham area registered a violation of the 1-hour ozone standard. EPA directed the Office of Federal Register to recall the direct final rule from publication. EPA proceeded to disapprove the redesignation request with final action published in the Federal Register on September 19, 1997 (62 FR 49154). By a letter dated September 10, 1997, EPA requested that Alabama submit an enforceable commitment to develop

a plan to attain the 1-hour ozone standard. The enforceable commitment submitted by the State included a schedule that required the State to submit a new attainment plan by July 1999.

This course of action was taken in lieu of a SIP Call because at the time EPA concluded that it would result in the submittal of an attainment plan on a more expeditious course than the timeframe under a SIP Call. If EPA had issued a SIP Call for the Birmingham area, the earliest the attainment SIP would have been due was January 2000.

On August 10, 1998, the State submitted an enforceable commitment without Board adoption, preventing EPA from approving it into the federally enforceable SIP. Therefore, Region 4 informed the State that a SIP Call would be promptly initiated. EPA proposed a SIP Call in the Federal Register on December 16, 1999 (64 FR 70205). In this action EPA proposed to require the State to submit an attainment SIP for Birmingham within six months after final action on the SIP Call and to implement controls by May 2003. The final rulemaking on the SIP Call was published October 28, 2000, with an effective date of November 27, 2000 (65 FR 64352). Alabama submitted the 1-hour ozone attainment demonstration to EPA on November 1, 2000.

In the final SIP Call, EPA stated that the March 2, 1995, extension policy entitled *Ozone Attainment Demonstration*, for ozone nonattainment areas classified serious and severe, is inapplicable in the Birmingham, Alabama, case. The SIP Call went further to state that EPA is not setting an attainment date for the Birmingham area through the SIP Call. Alabama would establish an appropriate attainment date in its SIP submittal. EPA did state in the SIP Call that we believed at that time that the attainment demonstration for Birmingham should provide for attainment by November 2003, since EPA was unaware of any evidence that Birmingham was affected by ozone transport from a nonattainment area with an attainment date later than 2003. While Birmingham is not affected by transport, it is a source of transport affecting the Atlanta, Georgia, nonattainment area. Atlanta, Georgia, is relying upon these reductions from Birmingham in its attainment demonstration.

Furthermore, the United States District Court for the Northern District of Alabama has already settled the same issues raised in this comment. In Vahle v. Browner, Civil Action No. CV 97-G-3150-S (N. D. Ala. 1998), a local citizen sued EPA seeking to compel EPA to reclassify the Jefferson and Shelby County area of Alabama from “marginal” to a “moderate” or “serious” ozone area. Among the issues considered by the Court was whether there had been de facto two one-year extensions of the attainment deadline as the plaintiff contended. The Court found that under the Clean Air Act (CAA), 42 U.S.C. §7511(5), the only authority to grant an extension is upon application by the State. The Court found there was no evidence in the record indicating either that the State of Alabama requested such an extension or that EPA granted such extension. In fact, the Jefferson/Shelby area met the attainment standard by the initial deadline.

The Court also addressed the issue involving the Jefferson/Shelby area’s failure to maintain its attainment status after the November 15, 1993, deadline. The plaintiff argued that CAA, 42 U.S.C. §7511(b)(2), should have been interpreted to require EPA to reclassify an area that “backslides” into non-attainment after its attainment date. The Court found that the clear wording of the statute prevented such interpretation. In its Memorandum Opinion at pages 4-5

the Court stated:

“The statute provides that the determination shall be ‘whether the area attained the standard by that date.’ 42 U.S.C. §7511(b)(2)(A) (emphasis added). There can be no question that the date referred to is the attainment date established in 42 U.S.C. §7511(a)(1), November 15, 1993, in the case of the Jefferson/Shelby area. Therefore, the statute is not remotely subject to the interpretation suggested by the plaintiff.”

EPA does not agree with the comment that the issues confronting Alabama are ‘identical’ to the issues litigated in Georgians for Transportation Alternatives, et al. v. Environmental Protection Agency, 11th Circuit Civil Appeal No. 00-012187-A. In that case, EPA made a determination that the proposed budgets were adequate for conformity purposes and forecasted an attainment date extension to 2003 because the Atlanta area is affected by the transport of ozone from other areas. That decision was challenged and the 11th Circuit issued a stay of the adequacy finding without explanation. The SIP Call notice specifically states that EPA is not setting an attainment date nor does EPA believe the Birmingham area is affected by transport (see page 64354). Thus, EPA believes that the 11th Circuit’s grant of a stay in Georgians for Transportation Alternatives, et al. v. Environmental Protection Agency has no precedential effect on EPA’s proposed action in Alabama. This is especially true since the underlying factual situation was different and the 11th Circuit did not give any rationale for its decision to grant a stay.

For these reasons, EPA does not agree with comment 1 that the Birmingham SIP does not demonstrate attainment by 1993, and therefore a finding of adequacy of the MVEB would, de facto, grant the Birmingham area an attainment date extension. EPA has not granted Birmingham an attainment date extension nor proposed to do so. Birmingham appeared to attain the 1-hour ozone standard by its attainment date, but then fell back into nonattainment. The area must now submit a new SIP demonstrating attainment as expeditiously as practicable. EPA believes that the 2003 date in the submitted SIP is as expeditious as practicable and that the MVEB in the SIP is consistent with that date.

2. COMMENT: Alabama has Not Demonstrated Attainment by the Earliest Practicable Date.

As noted above, Section 181 of the CAA requires that the “attainment date for ozone shall be *as expeditiously as practicable* but no later than the date provided in table 1.” Id. (emphasis added). Clearly, the overriding objective is to accomplish healthful air quality as soon as possible and Congress did not intend to allow unhealthful air quality to persist merely because a later attainment date was convenient. Yet it seems apparent that Alabama, with EPA’s approval, is pursuing just such an objective. The SIP submittal clearly states that “the earliest year that monitoring data can demonstrate attainment is 2001.” Attainment Demonstration, p. xvii. Further projections articulate a downward trend in ozone values “with attainment of the 1-hour standard possible by 2001 or 2002. *Id.* at xix. As noted above, an adequate MVEB must be “consistent with the applicable requirements for attainment . . . ,” 40 C.F.R. § 93.118(e)(4)(iv), and EPA’s proposed adequacy finding is inconsistent with the requirement of CAA §181 that attainment be accomplished as expeditiously as practicable, i.e. 2001.

Response:

EPA believes that 2003, the attainment date proposed by Alabama for the Birmingham area is as expeditious as practicable. As noted in the response to Comment 1, Alabama did attain the standard by the date required under CAA §181 in 1993. See Vahle v. Browner at pages 4-5. Thus, the issue is not whether Alabama failed to attain the standard and has, somehow, been granted an extension by EPA. Instead the issue is what regulatory action should be taken in an area that attains but subsequently violates the standard. EPA's actions in this circumstance are based on the statutory authority found at CAA § 110(k)(5) and not, as the comment seems to imply, under § 181.

In regard to the comments relating to the proposed attainment demonstration, the SIP states through monitoring data, that the earliest Birmingham may demonstrate attainment would be 2001. This statement was made based upon the results of four exceedances occurring at an individual monitor (Helena) during the summer of 1998. Although exceedances occurred during the summer of 1999, no monitor had more than two exceedances, thus if no monitor had more than a total of three exceedances during the 1999-2001 three-year period, the Birmingham nonattainment area could have been eligible for redesignation to attainment after the 2001 monitoring season. However, in 2000, Birmingham recorded more than 3 exceedances in the 3 year period (1999-2001). Accordingly, this made Birmingham ineligible to demonstrate attainment in 2001. In addition, when the state began modeling for attainment, it was thought that the area would be affected by ozone transport and therefore the 2003 date was chosen as a starting point to demonstrate attainment. The results of the modeling demonstrated that Birmingham did not need reductions from areas influenced or affected by transport to demonstrate attainment by 2003.

Furthermore, the modeling attainment demonstration relies upon NO_x controls for Alabama Power Company plants Gorgas and Miller, which will be in place by the year 2003. This is the earliest that the Power company could install and have operational the controls necessary to reach the 0.21 lb/MMBtu NO_x emission limit. The reductions from these controls is necessary to demonstrate attainment. Therefore, EPA believes that the 2003 attainment date proposed by Alabama for the Birmingham area is as expeditiously as practicable.

3. COMMENT: Alabama has Not Demonstrated Attainment as Required by Law.

Section 182(c)(2)(A) requires that the attainment demonstration “must be based on photochemical grid modeling or any other analytical method determined by the Administrator, in the Administrator’s discretion, to be at least as effective.” EPA’s SIP regulation requires: “The adequacy of a control strategy shall be demonstrated by means of applicable air quality models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models).” 40 CFR § 51.112(a)(1). Appendix W does not even identify an alternative analytical method other than specified air quality models for making ozone demonstrations. It certainly contains no finding that any alternative method is as effective for making such demonstrations.

The Birmingham attainment demonstration submitted by Alabama includes an air quality modeling analysis that demonstrates future violations of the 1-hour NAAQS after implementation of all the control measures in the SIP revision. Nothing in the CAA authorizes EPA to ignore that evidence, or to set it aside in favor of other evidence based on analytical techniques that do not satisfy the CAA's or the Agency's regulatory criteria for determining the adequacy of attainment demonstrations.

EPA proposes to approve Alabama's attainment demonstration based upon the Agency's "weight of the evidence" policy that provides factors for considering adjustments to the Birmingham region modeling analysis. This policy may be appropriate for the purpose of identifying the magnitude of additional emission reductions that may be needed to demonstrate attainment, but that estimate must be tested by air quality modeling using approved modeling techniques before a final determination of adequacy may be made. EPA cannot adopt a rule that requires the states to make air quality determinations using approved models, and then ignore the rule for the purpose of making back of the envelope calculations of "shortfalls." If the Urban Airshed Model has been selected as the state-of-the-art analytical tool for making assessments of ozone concentrations, then the CAA requires that any final approval of an attainment demonstration must be based on that model.

Response:

Under section 182(c)(2) and (d) of the Clean Air Act (CAA), serious and severe ozone nonattainment areas were required to submit by November 15, 1994, demonstrations of how they would attain the 1-hour standard. Section 182(c)(2)(A) provides that "[this attainment demonstration must be based on photochemical grid modeling or any other analytical method determined by the Administrator, in the Administrator's discretion, to be at least as effective.]" The Birmingham nonattainment area was designated a marginal nonattainment area and is therefore not subject to 182(c)(2) of the CAA. As such, an attainment demonstration based on photochemical grid modeling or any other analytical method approved by the Administrator is not required. Alabama Department of Environmental Management (ADEM) elected to develop a control strategy based on modeling and followed the EPA modeling guidance.

The comment also states that the Birmingham modeling indicates future violations of the 1-hour NAAQS and questions the use of weight of evidence analyses in determining the adequacy and approval of the attainment demonstration. The Birmingham modeling does not predict violations but exceedances. A model exceedance does not constitute a violation. Exceedances of the 1-hour NAAQS are allowed in EPA's modeling guidance providing the number for exceedances does not constitute a violation. The photochemical grid modeling results constitute the principal component of ADEM's analysis, with supplemental information designed to account for uncertainties in the model per the EPA guidance. It is EPA's interpretation that weight of evidence factors in conjunction with modeling can be used to demonstrate attainment. In addition, the notice on the adequacy of the motor vehicle budget is not a proposal for approval of the attainment demonstration. However, as noted the use of weight of evidence is allowed in an ozone attainment demonstration. A more detailed discussion of the use of weight of evidence in the attainment demonstration is provided in section VI.B of

the January 3, 2001 final rule (66 Federal Register 634) to approve the air quality implementation plan for the Greater Connecticut ozone nonattainment area.

4. COMMENT: Modeled Attainment Year v. Actual Attainment Year.

The Attainment Demonstration SIP acknowledges that EPA Region 4 has designated 2003 as the attainment year but that the future year modeled in the demonstration was 2004. Alabama concludes that “[g]iven uncertainties in techniques used to “grow” emissions from 1995 to 2003 or 2004, there should be little significant difference in emission projections between the two years.” *Id.* at 7-12. Of course, the “uncertainties” of the referenced algebraic techniques were not emphasized by Alabama in other portions of the document offered as a part of the “weight of evidence” test. We reiterate our objection to the use of techniques other than those required by 40 CFR § 51.112(a)(1), and specifically object to use of an “annual activity growth factor” as explained in Section 3.4. *Id.* at 3-54 – 3-58.

Response:

Objections were raised regarding AEDM’s use of techniques used to “grow” emissions from 1995 to 2003, which is different than the techniques required by 40 CFR §51.112(a)(1). The EPA modeling guidance in 40 CFR §51.112(a)(1) requires the use of the Urban Airshed Model (UAM) or another reactive pollutant modeling application for an urban area assessment of the ozone pollutant. ADEM did adhere to the recommendations in this regulation in developing the attainment demonstration for the Birmingham SIP. The Variable Grid version of the UAM model (UAM-V) was used. ADEM modeled 2004 for the attainment year and the demonstration indicates attainment. A 2003 emissions inventory, which is representative of emissions expected in the attainment year, was developed. The inventory represents future levels of volatile organic compounds and oxides of nitrogen that are less than that used in the modeling. Thus, further improvements in the air quality are expected than that modeled. The development of a 2003 emission inventory that is lower than that modeled in 2004 is still consistent with the modeling demonstrations. It can be concluded that emissions concentration for 2003, if modeled, would be lower than the 2004 1-hour ozone concentrations, which were modeled. Objections were raised on the use of annual factors to develop the 2003 emissions inventory. This comment is somewhat ambiguous due to the fact that annual activity growth factors are regularly used in developing projection inventories. This is consistent with EPA's July 1991, "Procedures for Preparing Emissions Projections," as well as the EIIP's December 1999 Emissions Projections guidance.