

effectively lowers the total emission reduction needed to attain at the highest site; and because of alleged flaws in the techniques for determining the magnitude of additional emission reductions. The commenter therefore asserts that approval of the attainment demonstration would be arbitrary, capricious and contrary to law for reasons set forth in comments submitted on March 5, 2003, as well as those previously submitted to EPA on February 14, 2000. Such comments also included EPA's treatment of over-prediction of ozone levels by the photochemical grid model, EPA's treatment of modeled exceedances over the standard and EPA's treatment of the photochemical grid modeling results prediction of exceedances even over the levels allowed after a downward adjustment under EPA's alternative test. Finally, the commenter asserts that EPA failed to adequately explain certain adjustments made to the photochemical grid modeling for the Washington area.

*Response 1:*

*WOE is consistent with the CAA and EPA regulations.*

With respect to the allegation that the WOE analysis used by EPA is not authorized by the Act or EPA rules, EPA consistently has interpreted the CAA to allow for a weight-of-evidence analysis as an interpretive adjunct to the photochemical grid modeling used to show that the Washington area will attain the ozone standard in 2005. *See, e.g.*, 66 FR 634, January 3, 2001; 66 FR 666, January 3, 2001; 66 FR 54143, October 26, 2001; 66 FR 54577, October 29, 2001; 66 FR 54597, October 29, 2001; 66 FR 54666, October 30, 2001; 66 FR 56903, November 13, 2001; 66 FR 56931, November 13, 2001; 66 FR 56944, November 13, 2001; 66 FR 57159, November 14, 2001; 66 FR 63921, December 11, 2001; 67 FR 5151, February 4, 2002; 67 FR 5170, February 4, 2002; 67 FR 30574, May 7, 2002; 67 FR 61786, October 2, 2002; 67 FR 72576, December 6, 2002; and 67 FR 72574, December 6, 2002. Because WOE is an adjunct to photochemical grid modeling, not a separate analysis, the commenter's assertion that the modeling for the Washington area is not consistent with the CAA is a misstatement.

As described in more detail below, the EPA allows states to supplement their photochemical modeling results with additional evidence designed to account for uncertainties in the photochemical modeling databases and application in order to demonstrate attainment. This approach is consistent with the requirement of section 182(c)(2)(A) that the attainment

demonstration "be based on photochemical grid modeling," because the modeling results constitute the principal component of EPA's analysis with supplemental information designed to account for uncertainties in the model. This interpretation and application of the photochemical modeling requirement of section 182(c)(2)(A) finds further justification in the broad deference Congress granted EPA to develop appropriate methods for determining attainment, as indicated in the last phrase of section 182(c)(2)(A).

This interpretation of the Act has been upheld by the Court of Appeals for the Fourth Circuit, which stated "EPA has long recognized that there are uncertainties inherent in available models and in estimating future emissions \* \* \*. EPA thus allows the use of supplemental analysis, including a "weight of evidence" analysis, to demonstrate attainment in cases where the modeling shows ozone levels exceeding the NAAQS." *1000 Friends of Maryland v. Browner*, 265 F.3d 216, 234 (4th Cir. 2001)(internal quotation omitted).

The flexibility granted to EPA under section 182(c)(2)(A) is also reflected in the regulations EPA promulgated for modeled attainment demonstrations. These regulations provide, "The adequacy of a control strategy shall be demonstrated by means of applicable air quality models, data bases, and other requirements specified in (40 CFR part 51, appendix W) (Guideline on Air Quality Models)." <sup>3</sup> 40 CFR 51.112(a)(1). The regulations further provide, "Where an air quality model specified in appendix W \* \* \* is inappropriate, the model may be modified or another model substituted [with approval by EPA, and after] notice and opportunity for public comment \* \* \*." Appendix W, in turn, provides that, "The Urban Airshed Model (UAM) is recommended for photochemical or reactive pollutant modeling applications involving entire urban areas," but further refers to EPA's modeling guidance for data requirements and procedures for operating the model. 40 CFR part 51, appendix W, section 6.2.1.a. The modeling guidance discusses the data requirements and operating procedures, as well as interpretation of model results as they relate to the attainment demonstration. This provision references guidance published in 1991; however, EPA envisioned that the

guidance would change as we gained experience with model applications, which is why the guidance is referenced, but does not appear, in Appendix W. With updates in 1996 and 1999, the evolution of EPA's guidance has led us to the use of the photochemical grid model, as well, or in conjunction, with additional analytical methods approved by EPA.

EPA's interpretation of the CAA is consistent with the statute's requirement that the attainment demonstration be "based on photochemical grid modeling." Giving the phrase "based on" its ordinary meaning, the statute requires only that an attainment demonstration "arise from" photochemical grid modeling, using the modeling as a "starting point" or "foundation." *See McDaniel v. Chevron Corp.*, 203 F.3d 1099, 1111 (9th Cir. 2000) (reviewing cases interpreting the phrase "based on"); *United States v. United Technologies Corp.*, 985 F.2d 1148, 1158 (2d Cir. 1993) ("based upon" does not mean "solely"). EPA's weight-of-evidence analysis is consistent with the plain meaning of the statute because photochemical grid modeling is the starting point of the analysis; indeed, the very purpose of the WOE analysis is to determine whether the modeling, in light of all the evidence, demonstrates attainment.

Even if the statutory language is ambiguous, EPA's interpretation is reasonable under *Chevron U.S.A. Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 842-45 (1984). The comments apparently are based on the premise that the statute should be read to say an attainment demonstration must be based solely on photochemical grid modeling without reliance on any analytical adjuncts. Even if this were a plausible reading of the statute, EPA's interpretation is equally permissible. *See United Technologies*, 985 F.2d at 1158. Our interpretation adheres to the normal meaning of the statutory language and is supported by the broad discretion that Congress granted to EPA in section 182(c)(2)(A).

Because EPA reasonably determined that WOE analysis is based on photochemical grid modeling, there is no merit to the alternative statutory argument found in the comments. The comments contend that WOE qualifies as an "other analytical method" under section 182(c)(2)(A), requiring the EPA Administrator to determine that weight-of-evidence is "at least as effective" as photochemical grid modeling. As noted, however, weight-of-evidence analysis is "based on photochemical grid modeling"; therefore, EPA did not employ an "other analytical method"

<sup>3</sup> The August 12, 1996 version of "Appendix W of Part 51—Guideline on Air Quality Models" was the rule in effect for these attainment demonstrations. EPA is proposing updates to this rule which will not be in effect until the new rule is promulgated.