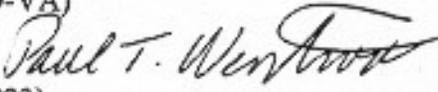


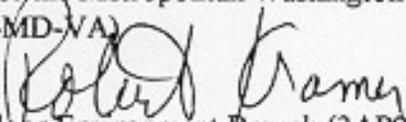
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103

JUN 22 2000

SUBJECT: Technical Support Document for Adequacy Findings for the Revised Motor Vehicle Emissions Budgets for the Out-Years 2015 and 2020 in the Phase II Ozone Attainment Plans for the Metropolitan Washington D.C. Ozone Nonattainment Area (DC-MD-VA)

FROM: Paul T. Wentworth, P.E. 
Environmental Engineer (3AP23)

TO: The Administrative Record on the Adequacy findings for the Revised Motor Vehicle Emissions Budgets for the Out-Years 2015 and 2020 in the Phase II Ozone Attainment Plans for the Metropolitan Washington D.C. Ozone Nonattainment Area (DC-MD-VA)

THRU: Robert Kramer, Chief 
Energy, Radiation and Indoor Environment Branch (3AP23)

I. Administrative Requirements For Making Adequacy Findings

The adequacy of these out-year motor vehicle emission budgets (budgets) contained in the revised Phase II Ozone Attainment Plans for the Metropolitan Washington D.C. Nonattainment Area (DC-MD-VA) were reviewed in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR Part 93, Sections 118 (e) (4) through (e) (5), and the guidance contained in the both the November 3, 1999 EPA Memorandum from Merrylin Zaw-Mon entitled: "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Areas," and the May 14, 1999 EPA Guidance Memorandum from Gay MacGregor entitled, "Conformity Guidance on the Implementation of the March 2, 1999 Conformity Court Decision."

Please note that on May 31, 2000, EPA found the budgets contained in the attainment plan for the Metropolitan Washington D.C. Ozone Nonattainment Area submitted by the District of Columbia, Maryland, and Virginia submitted on February 16, 2000, February 14, 2000, and February 9, 2000, respectively, adequate for transportation conformity purposes. The budgets are for the year 2005. EPA announced its findings in the Federal Register on June 8, 2000 (65 FR 36439). The effective date of those budgets is June 23, 2000.

By transmittal letters dated as shown in the table below, the District of Columbia, Maryland and Virginia again each formally submitted State Implementation Plan (SIP) revisions amending the Phase II attainment demonstration (the attainment plan) for the Metropolitan Washington D.C. Ozone Nonattainment Area (the Washington D.C. area). The purpose of these SIP revisions is to

Department of Environmental Air Quality (VDEQ) and the District of Columbia Air Resources Management Division, informing them of our adequacy findings on the budgets for the Washington, D.C. Area.

We will publish a Federal Register notice announcing our adequacy findings. The effective date of the adequacy findings will be 15 days after the publication date of that Federal Register notice. The letters to each of the three areas and the attached TSDs will be posted on EPA's website at <http://www.epa.gov/oms/traq> once EPA has published the Federal Register notice announcement of our findings.

II. Public Comments Received on the Budgets and EPA's Responses

Before summarizing and responding to the specific comments, the difference between finding budgets adequate and approving them as part of an ROP or attainment demonstration SIP revision via a rulemaking action must be understood. The adequacy process is separate from the notice and comment rulemaking process conducted by EPA to approve or disapprove the ROP and attainment plans as SIP revisions. The rulemaking process to approve or disapprove these plans as SIP revisions involves a more detailed examination of the technical analyses submitted by the State to demonstrate ROP and attainment. EPA's adequacy findings are determinations that submitted budgets are consistent with attainment, maintenance and/or ROP for conformity purposes. EPA's actual approval or disapproval of the budgets into the SIP occurs when we have completed our full rulemaking process on the relevant ROP or attainment plan and have either approved or disapproved it as a SIP revision. The adequacy process considers certain criteria specified in 40 CFR 93.118 in order to allow the use of these submitted budgets in conformity determinations while EPA is completing its formal review process to determine whether to approve the ROP and attainment plans as SIP revisions. Therefore, we are deferring addressing those comments which are germane to the approvability of the ROP and attainment plans as required SIP revisions for the time being rather than addressing them in the context of this TSD prepared in support of our adequacy findings on the budgets. EPA will address comments germane to approvability of the ROP and attainment plans in our rulemakings to approve or disapprove them as SIP revisions.

Comment: We received comments asserting the weight of evidence approach does not demonstrate attainment or meet CAA requirements for a modeled attainment demonstration. The comments raise several criticisms of various technical aspects of the weight of evidence approach, including certain specific applications of the approach to particular attainment demonstrations.

Response: Under section 182(c)(2) and (d) of the 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 "[t]his 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." As described in more detail below, the EPA allows states to rely on photochemical modeling results, supplemented with additional evidence designed to account for uncertainties in the

photochemical modeling, 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 adjustments 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).

The flexibility granted to EPA under section 182(c)(2)(A) is 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).” 40 CFR 51.112(a)(1). However, 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 51 App. 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, but EPA envisioned 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 use both the photochemical grid model as well as consider additional analytical methods approved by EPA.

The modeled attainment test compares model predicted 1-hour daily maximum ozone concentrations in all grid cells for the attainment year to the level of the NAAQS. The results may be interpreted through either of two modeled attainment or exceedance tests: a deterministic test or a statistical test. Under the deterministic test, a predicted concentration above 0.124 parts per million (ppm) ozone indicates that the area is expected to exceed the standard in the attainment year and a prediction at or below 0.124 ppm indicates that the area is expected to *not* exceed the standard. Under the statistical test, attainment is demonstrated when all predicted (i.e., modeled) 1-hour ozone concentrations inside the modeling domain are at, or below an acceptable upper limit above the NAAQS permitted under certain conditions (depending on the severity of the episodes modeled) by EPA’s guidance.¹

In 1996, EPA issued guidance² to update the 1991 guidance referenced in 40 CFR 50 App. W, to

¹ Guidance on the Use Of Modeled Results to Demonstrate Attainment of the ozone NAAQS. EPA- 454/B-95-007, June 1996.

² Ibid.

make the modeled attainment test more closely reflect the form of the NAAQS (i.e., the statistical test described above), to consider the area's ozone design value and the meteorological conditions accompanying observed exceedances, and to allow consideration of other evidence to address uncertainties in the modeling databases and application. When the modeling does not conclusively demonstrate attainment, EPA has concluded that additional analyses may be presented to help determine whether the area will attain the standard. As with other predictive tools, there are inherent uncertainties associated with air quality modeling and its results. The inherent imprecision of the model means that it may be inappropriate to view the specific numerical result of the model as the only determinant of whether the SIP controls are likely to lead to attainment. The EPA's guidance recognizes these limitations, and provides a means for considering other evidence to help assess whether attainment of the NAAQS is likely to be achieved. The process by which this is done is called a weight of evidence (WOE) determination. Under a WOE determination, the state can rely on, and EPA will consider, factors such as other modeled output, e.g., changes in the predicted frequency and pervasiveness of 1-hour ozone NAAQS exceedances and predicted changes in the ozone design value; actual observed air quality trends (i.e. analyses of monitored air quality data); estimated emissions trends; and the responsiveness of the model predictions to further controls.

In 1999, EPA issued additional guidance³ that makes further use of model results for base case and future emission estimates to predict a future design value. This guidance describes the use of an additional component of the WOE determination, which requires, under certain circumstances, additional emission reductions that are or will be approved into the SIP, but that were not included in the modeling analysis, that will further reduce the modeled design value. An area is considered to monitor attainment if each monitor site has air quality observed ozone design values (4th highest daily maximum ozone using three years of data) at or below the level of the standard. Therefore, it is appropriate for EPA, when making a determination that a control strategy will provide for attainment, to determine whether or not the model-predicted future design value is expected to be at or below the level of the standard. Since the form of the 1-hour NAAQS allows exceedances, it did not seem appropriate for EPA to require the test for attainment to be "no exceedances" in the future model predictions. The method outlined in EPA's 1999 guidance uses the highest measured design value from all sites in the nonattainment area for each of three years.⁴ The three year "design value" represents the air quality observed

³ "Guidance for Improving Weight of Evidence Through Identification of Additional Emission Reductions, Not Modeled." U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Emissions, Monitoring, and Analysis Division, Air Quality Modeling Group, Research Triangle Park, NC 27711. November 1999. Web site: <http://www.epa.gov/ttn/scram>.

⁴ A comment criticizes the 1999 guidance as flawed on grounds that "it allows the averaging of the three highest air quality sites across a region, whereas EPA's modeling guidance requires that attainment be demonstrated at each site. This has the effect of allowing lower air quality concentrations to be averaged against higher concentrations thus reducing the total emission reduction needed to attain at the higher site." The concern expressed in this comment is misplaced. EPA relies on this averaging only for purposes of determining one component, i.e. -- the amount of additional emission reductions not modeled -- of the WOE determination. The WOE determination, in turn, is intended to be a qualitative assessment of whether additional factors (including the additional emissions reductions not modeled), taken as a whole, indicate that the area is more likely than not to attain.

during the time period used to predict ozone for the base emissions. This is appropriate because the model is predicting the change in ozone from the base period to the future attainment date. The three yearly design values (highest across the area) are averaged to account for annual fluctuations in meteorology. The result is an estimate of an area's base year design value. The three year "design value" is multiplied by a ratio of the peak model predicted ozone concentrations in the attainment year (i.e., average of daily maximum concentrations from all days modeled) to the peak model predicted ozone concentrations in the base year (i.e., average of daily maximum concentrations from all days modeled). The result is an attainment year design value based on the relative change in peak model-predicted ozone concentrations from the base year to the attainment year. Modeling results also show that emission control strategies designed to reduce areas of peak ozone concentrations generally result in similar ozone reductions in all core areas of the modeling domain, thereby providing further assurance of attainment at all monitors.

In the event that the attainment year design value is above the standard, the 1999 guidance provides a method for identifying additional emission reductions, not modeled, which at a minimum provides an estimated attainment year design value at the level of the standard. This step uses a locally derived factor which assumes a linear relationship between ozone and the precursors. Although a comment was raised that this technique for estimating ambient improvement because it does not incorporate complete modeling of the additional emissions reductions, none of the applicable guidance or regulations mandates or suggests that States model all control measures being implemented. Moreover, a component of this technique—the estimation of future design value, should be considered a model predicted estimate.

When reviewing a SIP, the EPA must make a reasonable determination that the control measures identified are more likely than not to attain. Under the WOE determination, EPA has made these determinations based on all of the information presented by the States and available to EPA. This included model results for the majority of the control measures. Though all measures were not modeled, EPA reviewed the model's response to changes in emissions as well as observed air quality changes to evaluate the impact of a few additional measures, not modeled. EPA's decision was further strengthened by the States commitment to a mid-course review to check progress towards attainment in 2003 and adopt additional measures, if the anticipated progress is not being made.

A comment was raised that further criticized EPA's technique for estimating the ambient impact of additional emissions reductions not modeled on grounds that EPA employed a rollback modeling technique that, according to this comment, is precluded under EPA regulations. The comment explained that 40 CFR 51 App. W section 6.2.1.e. provides, "Proportional (rollback/forward) modeling is not an acceptable procedure for evaluating ozone control strategies." Section 14.0 of appendix W defines "rollback" as "a simple model that assumes that if emissions from each source affecting a given receptor are decreased by the same percentage, ambient air quality concentrations decrease proportionately." Under this approach if 20% improvement in ozone was needed for the area to reach attainment, it was assumed a 20% reduction in VOC would be required. This approach was never applied to NO_x, is a purely empirically/mathematically derived relationship, and is not the approach EPA used. EPA used a

locally derived (as determined by the model and/or observed changes in air quality) ratio of change in emissions to change in ozone to estimate additional emission reductions to achieve an additional increment of ambient improvement in ozone. This did assume a linear relationship between the precursors and ozone for a small amount of ozone improvement. The prohibition in Appendix W applies to the use of a rollback method which is empirically/mathematically derived and independent of model estimates or observed air quality and emissions changes as the sole method for evaluating control strategies. EPA has generally relied on photochemical modeling to evaluate the attainment demonstrations and their control strategies, and has used locally derived adjustment factors as a component to estimate the extent to which additional emissions reductions -- not the core control strategies -- would reduce ozone levels and thereby strengthen the weight of evidence test. This limited use of adjustment factors is more technically sound than the unacceptable use of proportional rollback. The limited use of adjustment factors is more practical in light of the uncertainty in the modeling; the resources and time required to perform additional modeling; and the requirement that areas perform a mid-course review by the end of 2003.

Contrary to concerns expressed in a comment, EPA did not err by modifying the modeling requirements without first proposing to do so. Section 3.0 of appendix W states, "It should not be construed that the preferred models identified here are the only models available for relating emissions to air quality." Section 3.2.2 of appendix W further provides that the "determination of acceptability of a model is a Regional Office responsibility. Where the Regional Administrator finds that an alternative model is more appropriate than a preferred model, that model may be used subject to the recommendations below. This finding will normally result from a determination that (1) A preferred air quality model is not appropriate for the particular application; or (2) a more appropriate model or analytical procedure is available and is applicable." Therefore, EPA does have the discretion to identify a more appropriate analytical procedure without undergoing rulemaking on updates to Appendix W. Also, as discussed above, by reference to the modeling guidance, Appendix W was designed to allow changes in the predictive tools and data bases without undergoing additional rulemaking. In any event, the EPA is taking comment during the SIP rulemaking process on the application of its guidance.

A comment raised concern that EPA applied unacceptably broad discretion in fashioning and applying the WOE determinations. EPA disagrees. The WOE determinations are made on a case-by-case basis. EPA has approved attainment demonstrations based on WOE determinations, generally with a requirement for additional reductions not modeled, only when the photochemical modeling provides a basis for believing that the SIP controls will achieve substantial ozone reductions, if not attainment levels. The fact that these WOE adjustments are incremental leads EPA to conclude that they may be made on a case-by-case basis, without hard-and-fast guidelines. Moreover, EPA believes that the WOE approach is bounded by the strength of the various factors that may be applied. The comment raised as an example EPA's application of the WOE approach to the Washington, D.C. attainment demonstration where modeling showing an ozone level (as adjusted) of 142 ppb was compared to the acceptable upper limit of 137 ppb. The comment was made that EPA adjusted the modeled prediction on average by a factor of 19% to account for model overprediction, and suggested both that such an adjustment was not appropriate and that, if used, no further adjustment for WOE factors was appropriate.

EPA puts no limit on the amount of WOE factors that may be considered. In addition, in EPA's view, the 19% overprediction that underlies the 142 ppb level is only a rough approximation of the extent of modeling uncertainty. As a result, EPA applied the 1999 guidance (using the original model prediction of 156, and not the adjusted value of 142 ppb) to estimate the future design value as another way of addressing model uncertainty, in the same manner as applied to all of the other attainment demonstrations received. Both the assessment of overprediction and the estimated future design value were used in the WOE determination.⁵

The comment was also raised that complained EPA has applied the WOE determinations to adjust modeling results only when those results indicate nonattainment, and not when they indicate attainment. EPA agrees that to date, it has applied WOE determinations only in the context of demonstrations that indicate nonattainment, but the main reason is simply that these comprise most of the demonstrations that the States have presented to EPA.

A comment was made that further criticized EPA's application of the WOE determination on grounds that EPA ignores evidence indicating that continued nonattainment is likely, such as, according to the comment, monitoring readings indicating that ozone levels in many cities during 1999 continue to exceed the NAAQS by margins as wide or wider than those predicted by the UAM model. EPA believes that this comment misses the mark because although some cities continued to experience nonattainment ozone levels during 1999, the 1999 monitoring data provide little basis for evaluating the performance of the UAM model as used in the various attainment demonstrations. Many areas did not model expected 1999 ozone levels, that are or will be approved into the SIP but that were not included in the modeling analysis. and in any event, many areas had not, by 1999 implemented additional ozone-precursor controls that would be expected to lead to the ozone reductions projected by the models.⁶ In addition, the comment

⁵ Observing that for the attainment demonstration for the Washington, D.C. area, EPA reduced modeled ozone values by 19% to account for model overprediction, a comment was made that criticized this technique as lacking technical justification. EPA explained this technique in "Technical Support Document for the One-Hour Ozone Attainment Demonstrations submitted by the State of Maryland, Commonwealth of Virginia and the District of Columbia for the Metropolitan Washington, D.C. Ozone Nonattainment Area," November 30, 1999. The modeled peak ozone results generally correlated (in geographic proximity) with the monitored peak ozone emissions (and the modeled plume generally correlated (in geographic proximity) with the observed ozone plume), except that the peak modeled ozone levels averaged approximately 19-20% higher than the peak monitored levels. Modeling uncertainties (including, for example, the non-linearity of the modeling) lead EPA to conclude that adjusting each modeled peak by the 19% average over-prediction was at least as sensible as adjusting each modeled peak by an amount that corresponds to that modeled peak's relationship to the monitored ozone value in the same vicinity.

⁶ The comment raised the issue that monitored readings during 1999 in the Washington, D.C. nonattainment area indicated nonattainment levels, but these data, again, do not provide much basis for evaluating the UAM model. In any event, at the time of the 1999 monitored readings, the Washington, D.C. area had not implemented certain measures that were required to be implemented as part of the attainment demonstration, and neither the Washington, D.C. area nor areas upwind of it had implemented through SIP revisions the NOx reductions required under the NOx SIP Call, 63 FR 57,356 (Oct. 27, 1998). Implementation of all these controls may be expected to reduce ozone levels in the Washington, D.C. area.

The comment was raised that for Atlanta, modeled results generally did not much vary from monitored results, and that in several areas, modeled results appeared to underestimate ozone levels. However, in acting on

argued that in applying the WOE determinations, EPA ignored factors showing that the SIPs under-predict future emissions, and included as examples certain mobile source emissions sub-inventories. EPA is presently evaluating mobile source emissions data as part of an effort to update the computer model for estimating mobile source emissions. EPA is considering various changes to the model, and is not prepared to conclude at this time that the net effect of all these various changes would be to increase or decrease emissions estimates.

A comment also criticized the 1999 Guidance Document on grounds that EPA could not apply it, by its terms, to the Houston area because the result of such application would have been absurd. The comment also stated that the technique used to estimate the additional needed emission reductions for the Houston area does not identify a sufficient level of emission reduction to reach attainment. In addition, according to the comment, the technique used for the Houston area is substantially at variance with the UAM modeling analyses performed by Texas and submitted to EPA as SIP revisions. Specifically, Texas showed in its May 1998 SIP submission that emissions in the Houston area would have to be reduced to 230 tons per day to attain. By contrast, according to the comment, EPA's combination of techniques would allow 259 [sic., 289] tons per day of emissions, and yet EPA claims that the area will attain with even this higher level of emissions.

Direct application of the two methods discussed in the EPA's November 1999 guidance produced a mathematical impossibility for the Houston area. The results using either method were that all ozone precursor emissions would have to be reduced to less than zero. Thus, those two methods discussed in the 1999 guidance are not directly applicable to the Houston area's particular situation. Although this 1999 guidance memorandum describes two techniques for estimating additional levels of emission reductions, the memorandum should not be read to discourage or preclude the use of another technique. Both techniques (methods) described in the 1999 guidance are based on the assumption that EPA can estimate the relationship between ozone and its precursors. EPA Region 6 and TNRCC worked together to develop a revised method that was still consistent with the concepts in the 1999 guidance for estimating the relationship, but appropriate for the Houston area's modeling results. One of the methods in the guidance (Method 1) uses a linear extrapolation of model results to determine expected ozone benefits from additional precursor reductions. The revised method for the Houston area is also an extrapolation of model results. Instead of a linear extrapolation, however, a quadratic extrapolation was developed based on the results of three of the modeling runs (i.e., VIa, VIb, and VIc) for the Houston area. A quadratic extrapolation is necessary because of the non-linearity of the ozone response to NO_x reductions in the Houston area. Therefore, the revised method is a refinement of Method 1 described in the 1999 guidance, based on the most recently available modeling for the Houston area. The factors used in the revised method for the Houston area are based on model results for the majority of the control measures and, consequently, are scientifically sound for the Houston area. We believe this approach is consistent with the intent and criteria of the 1999 guidance and, in the case of the Houston area, gives a better

Atlanta's attainment demonstration, EPA generally did not apply WOE factors except for taking into account ambient improvement due to upwind NO_x reductions required under the NO_x SIP Call, and for requiring additional emissions reductions not modeled.

approximation of the amount of emission reductions that will be necessary to achieve the standard. Therefore, it is EPA's preliminary finding that this revised method meets the EPA guidance, and it is as rigorous, if not more rigorous, than the two methods discussed in the 1999 guidance.

The 230 tons per day emission level in the May 1998 SIP submission was based upon "across-the-board" emission sensitivity modeling and not specific control measures, such as was modeled in strategy H2 submitted in the November 1999 attainment demonstration. Thus, the 230 tons per day emission level is not associated with any control measures, and it is not appropriate as a regulatory emission level for an attainment SIP.

With regards to whether the revised approach sufficiently identifies the expected additional amount of emission reductions needed for attainment by the deadline, we believe that the comment raised failed to take into account all of the measures that will reduce ozone in the Houston area's modeled control strategies submitted in the November 1999 SIP. In model strategy H2 (upon which the budgets are based), Texas modeled the effect of a prohibition on the use of construction equipment during the morning hours. The morning construction ban is different than most measures because it does not have the effect of reducing emissions, only shifting the time that they occur. By shifting the time that the NO_x emissions occur to later in the day, there is less time for the NO_x emissions to participate in the photochemical reaction before the sun sets. Therefore, less ozone is formed. This shift in timing of emissions changes the relationship between the peak ozone level to the total level of emissions. Therefore, the quadratic relationship correlating the level of ozone to the total level of emissions had to be adjusted. This shifted the curve used to estimate the amount of additional NO_x emission reductions by 9.5% based on comparing results of similar modeling runs with and without the time shift in construction emissions. The 9.5% is a percentage of the 2007 base emissions of 1052 tons per day. It is this adjustment in the curve that is the primary reason for the apparent discrepancy in the estimated level of emission reductions that are necessary for attainment. If some of the area's emissions are shifted from the morning to later in the day, the total amount of emissions for the day can be higher with lower ozone levels.

As a result, EPA preliminarily concludes that the State of Texas used an acceptable method under the November 1999 guidance and applied it correctly.

Therefore, EPA concludes that the State of Maryland, the Commonwealth of Virginia and the District of Columbia have met the necessary requirements for the Agency to preliminarily determine that the SIP and the associated commitments demonstrate attainment. As a result, EPA finds that the motor vehicle emissions budgets consistent with the attainment demonstration are adequate. Some comments received by EPA submitted additional specific comments on the weight of evidence analysis for the State of Maryland, the Commonwealth of Virginia and the District of Columbia. EPA will address these comments fully in the context of rulemaking to approve the attainment demonstration. Because EPA is only preliminarily concluding that the attainment demonstration is approvable for purposes of finding the budgets adequate without completing rulemaking at this time on the attainment demonstrations, EPA believes that it need only address general comments about the appropriate tests for approving attainment

demonstrations at this time and preliminarily determine that they were properly applied in this case. Detailed analysis of the attainment demonstration and specific comments on application of appropriate requirements will be addressed in subsequent rulemaking on approvability of the SIP. The adequacy process is separate from the notice and comment rulemaking process conducted by EPA to approve or disapprove the attainment plans as SIP revisions. The rulemaking process to approve or disapprove these plans as SIP revisions involves approval of their associated control strategies and a more detailed examination of the technical analyses submitted by the state to demonstrate attainment. Therefore, EPA's adequacy findings are that submitted budgets are consistent with attainment, maintenance and/or ROP for conformity purposes. EPA's actual approval or disapproval of the budgets into the SIP occurs when we have completed our full rulemaking process on the relevant ROP or attainment plan and have either approved or disapproved it as a SIP revision. The adequacy process considers certain criteria specified in 40 CFR 93.118 in order to allow the use of these submitted budgets in conformity determinations while EPA is completing its formal review process to determine whether to approve the ROP and attainment plans as SIP revisions.

Comment: We received comments asserting that EPA can not extend attainment dates under its attainment date extension policy.

Response: Several commentors objected to EPA basing its determination of adequacy for serious areas on a SIP submission that provides for attainment by a date later than 1999, and raised issues concerning the validity of EPA's policy for extending attainment dates for areas affected by transported ozone, and the application of that policy to the Washington D.C. area. In the December 16, 1999, proposal regarding Maryland's, Virginia's and the District of Columbia's attainment demonstration for the Washington D.C. area, EPA proposed that if it finds that the Washington D.C. area is eligible for an attainment date extension under this policy, then its attainment date would be extended from 1999 to 2005.

EPA finds it unnecessary here to address the substance of commentors' objections to the attainment date extension policy, since whether or not the policy is applied to the Washington D.C. area, it is reasonable to expect that the area will be subject to the later attainment date of 2005. This is because even if the attainment date extension policy is not applied to the Washington D.C. area, and even assuming that EPA takes final action as would be required under section 181 to determine that the Washington D.C. area did not attain by its original attainment date of 1999, the area would then be reclassified as a severe area with an attainment date later than 1999 – as expeditiously as practicable, but no later than 2005. The State has determined that attainment as expeditiously as practicable would be no sooner than 2005, and EPA preliminarily agrees. The local modeling for the Washington area showed that emission levels in Baltimore affect peak ozone concentrations in the Washington area on July 19, 1991, and July 16, 1991, two of three most severe episode days modeled. These changes are discussed regarding model runs S4A2b and S5A2b on pages 25 to 29 in the appendices of the District's, Maryland's, and Virginia's April 24, 1998, April 29, 1998 and April 29, 1998, respectively, submittals. The two model runs investigated the effects on ozone in the Washington portion of the Baltimore-Washington domain when additional reductions beyond the 1999 base case were implemented in the Baltimore nonattainment area portion of the domain. The Baltimore area has

an attainment date of 2005 and is required to achieve additional reductions beyond the 1999 base case. The Washington area has been identified as a downwind area affected by transport from upwind areas in other States that significantly contribute to nonattainment in the Washington area and, in the case of Maryland's portion of the Washington area, from upwind area, Baltimore, in the same State with a later attainment date of 2005.

Thus, it is reasonable to forecast an attainment date for the Washington D.C. area, regardless of whether the area is determined to be entitled to an extension under EPA's transport policy. Since the attainment date for purposes of an adequacy determination would be the same - 2005 - whether or not the area is given an attainment date extension or is reclassified, issues regarding the validity of the attainment date extension policy are irrelevant to the adequacy determination, and need not be resolved in this rulemaking. EPA will address all comments on the appropriate application of the attainment date extension policy in the subsequent rulemaking process for approval of the attainment demonstration.

Comment: We received comments which assert that the SIPs do not meet the Act's Rate of Progress (ROP) requirements.

Response: The CAA requirements for an attainment demonstration under section 182 (c)(2)(A) and (d) and the various ROP demonstrations under section 182(b)(1) and (c)(2)(B) are separate requirements which EPA can act on separately. EPA is currently taking action only on the adequacy of the motor vehicle emissions budgets in the attainment demonstration SIP, and is not taking action on budgets for ROP because either they have not been submitted or in certain cases they have already been found adequate. This adequacy determination concerns only budgets for the demonstration of attainment in Metropolitan Washington D.C. nonattainment area and not budgets for the demonstration of ROP. EPA will address comments on the adequacy of ROP budgets which have not yet been found adequate when such budgets are submitted and posted on EPA's adequacy website for adequacy review.

Comment: We received comments asserting that it is illegal to provide credit towards an attainment demonstration for measures that have not been approved by EPA into the SIP.

Response: EPA agrees that it can not credit measures towards approval of an attainment demonstration unless the measures themselves or an enforceable commitment to adopt the measures are approved into the federally enforceable SIP, or measures are promulgated as required federal measures. However, EPA is not approving the attainment demonstration at this time. EPA will ensure that all measures are approved, promulgated, or enforceably committed to prior to approval of the attainment demonstration. The conformity rules specifically allow emission reduction credit to be taken for purposes of conformity determinations for any measures that have been either adopted by the enforcing jurisdiction, included in the applicable implementation plan, contained in a written commitment in the submitted implementation plan, or promulgated by EPA as a federal measure. See 40 CFR 93.122(a)(3). Because EPA believes that it will be able to approve the attainment demonstration as all measures will be approved into the SIP in a timely fashion, EPA concludes that it is appropriate to find the budgets adequate at this time based on the commitments in the submitted SIPs to all of the necessary measures. EPA

finds that the budgets are consistent with attainment and all of the measures meet the requirements of the conformity rule.

Comment: We received comments asserting that budgets can not take credit for measures which have not been adopted and are not enforceable, including measures to comply with the NO_x SIP call.

Response: As noted above, EPA agrees that it can not credit measures towards approval of an attainment demonstration unless the measures themselves or an enforceable commitment to adopt the measures are adopted and approved into the federally enforceable SIP, or measures are promulgated as required federal measures. However, EPA is not approving the attainment demonstration at this time. EPA will ensure that all measures are adopted and approved, promulgated, or enforceably committed to, and thus that they are enforceable under the SIP, prior to approval of the attainment demonstration. As also noted above, the conformity rules specifically allow emission reduction credit to be taken for purposes of conformity determinations for any measures that have been either adopted by the enforcing jurisdiction, included in the applicable implementation plan, contained in a written commitment in the submitted implementation plan, or promulgated by EPA as a federal measure. See 40 CFR 93.122(a)(3).

Furthermore, the conformity rule has always provided for SIPs to be used for conformity purposes even where all measures are not fully adopted in enforceable form, provided there are written commitments to such measures. For example, 40 CFR 93.120(a) allows the budgets in a disapproved SIP to be used for conformity purposes if the disapproval is accompanied by a protective finding, i.e., if the SIP includes written commitments to adopt control measures sufficient to satisfy the emissions reductions requirements for attainment, even if the control measures are not already adopted in enforceable form. See 62 FR 43796, first column, for more details. Because the conformity rule clearly envisions that budgets can be used for conformity even if they are based on commitments rather than fully adopted and enforceable measures, EPA believes it is appropriate to find the budgets in Maryland's, Virginia's and the District of Columbia's attainment demonstration SIPs for the Washington area adequate for conformity purposes. In summary, because all measures which have not yet been adopted are either required as federally promulgated measures or included in written commitments in the SIP, EPA believes that it can find the budgets adequate consistent with the conformity rule requirements on crediting measures.

With specific reference to measures to comply with the NO_x SIP call, EPA found that current SIPs in 22 states and the District of Columbia (23 jurisdictions) were insufficient to provide for attainment and maintenance of the 1-hour standard because they did not regulate NO_x emissions that significantly contribute to ozone transport. 63 FR 57356 (October 27, 1998). This rule called on the 23 jurisdictions to revise their SIPs to require NO_x emission reductions within the state to a level consistent with a NO_x emissions budget identified in the final rule. This final rule is commonly referred to as the NO_x SIP Call. Although the NO_x SIP submittal date has been indefinitely stayed by a three-judge panel of the Court of Appeals for the District of Columbia Circuit, the rule itself requiring emission reductions to be implemented by May 1, 2003,

continues to be in effect. In a March 3, 2000 decision the court upheld the NOx SIP call in most significant respects. The court remanded and vacated the rule as it applied to three states -- Wisconsin, Georgia and Missouri, and remanded two relatively small portions of the budget. Michigan v. EPA, No. 98-1497 (D. C. Cir., March 3, 2000). To enable areas to promptly proceed with SIP adoption, EPA has since moved the court to lift the stay of the SIP submittal deadline that the court entered in May 1999. This motion is pending before the court. In the meantime, the rule requiring SIPs to provide for emission reductions by May 1, 2003, remains a federal requirement. Therefore, EPA believes it is appropriate to allow states to continue to assume that reductions from the NOx SIP Call in areas outside the local 1-hour ozone modeling domain would be in place by that date for purposes of finding budgets adequate.

Comment: We received comments asserting that each of Maryland's, Virginia's and the District of Columbia's SIP revisions rely on EPA guidance memoranda to calculate emission reductions associated with the AIM coatings control measure, autobody refinishing rule, and consumer products rule. The comments further assert that the EPA memoranda were based on the proposed federal regulations and that the final rules that were ultimately adopted did not produce the level of emission reductions estimated in the proposed rule and the memoranda. The comments further assert that, as a result, the credits claimed in the proposed SIP revisions need to be recalculated to reflect changes that resulted with the final adoption of the rules, specifically in the VOC content for certain coatings and extended compliance dates.

Response: Architectural and Industrial Maintenance (AIM) Coatings: EPA's March 22, 1995 memorandum⁷ allowed states to claim a 20% reduction in VOC emissions from the AIM coatings category in ROP and attainment plans based on the anticipated promulgation of a national AIM coatings rule. In developing the attainment SIP for the Metropolitan Washington, DC nonattainment area, Maryland, Virginia and the District of Columbia relied on this memorandum to estimate emission reductions from the anticipated national AIM rule. EPA promulgated the final AIM rule in September 1998, codified at 40 CFR Part 59 Subpart D. In the preamble to EPA's final AIM coatings regulation, EPA estimated that the regulation will result in 20% reduction of nationwide VOC emissions from AIM coatings categories (63 FR 48855). The estimated VOC reductions from the final AIM rule resulted in the same level as those estimated in the March 1995 EPA policy memorandum. In accordance with EPA's final regulation, Maryland, Virginia and the District of Columbia have assumed a 20% reduction from AIM coatings source categories in its attainment plan. AIM coatings manufacturers were required to be in compliance with the final regulation within one year of promulgation, except for certain pesticide formulations which were given an additional year to comply. Thus all manufacturers were required to comply, at the latest, by September 2000. EPA believes that all emission reductions from the AIM coatings national regulation will occur by 2002 and therefore are creditable in Maryland's, Virginia's and the District of Columbia's attainment demonstration for the Washington area.

⁷"Credit for the 15 Percent Rate-of- Progress Plans for Reductions from the Architectural and Industrial Maintenance (AIM) Coating Rules," March 22, 1995, from John S. Seitz, Director, Office of air Quality Planning and Standards to Air Division Directors, Regions I-X

Autobody Refinish Coatings Rule: According to EPA's guidance⁸ and proposed national rule, many States have claimed a 37% reduction from this source category based on a proposed rule. However, EPA's final rule, "National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings," published on September 11, 1998 (63 FR 48806), did not regulate lacquer topcoats and will result in a smaller emission reduction of around 33% overall nationwide. The 37% emission reduction from EPA's proposed rule was an estimate of the total nationwide emission reduction. Since this number was an overall average, it was not applicable to any specific area. For example, in California the reduction from the national rule is zero because its rules are more stringent than the national rule. In the proposed rule, the estimated percentage reduction for areas that were unregulated before the national rule was about 40%. If an area were unregulated before the national rule, the 40% would be our estimate except for one rule change made between proposal and final: the exemption of lacquer topcoats. As a result of that exemption, the estimated percentage reduction for previously unregulated areas is about 36%. Therefore, most areas will need to make up the approximately 1% difference in the reductions to be achieved from the final program and those assumed based on the proposed program. In the case of the District and Virginia, they are not claiming reductions in excess of 36%, and, thus, there is no difference to be made up.

In the case of Maryland, Maryland has adopted its own state autobody refinishing rule which was approved into the Maryland SIP (62 FR 41853, August 4, 1997). Maryland based its calculation of emissions reduction from its state regulation and not the federal regulation. As previously discussed, the process of making adequacy findings for budgets is separate from the detailed review of the technical analyses provided by a state when EPA is conducting rulemaking to approve or disapprove submitted ROP and attainment plans as SIP revisions. For purposes of making adequacy findings on these budgets, EPA believes that the data used by MDE to calculate the reductions from the Maryland Autobody Refinishing rule is correct.

Consumer Products Rule: According to EPA's guidance⁹ and proposed national rule, States have claimed a 20% reduction from this source category. The final rule, "National Volatile Organic Compound Emission Standards for Consumer Products," (63 FR 48819), published on September 11, 1998, will result in a 20% reduction. Therefore the reductions obtained by States from the final national rule are consistent with credit which was claimed.

Comment: We received comments asserting that the attainment and rate of progress demonstrations are flawed because they assume a fleet mix that does not accurately reflect the growing proportion of sport utility vehicles and gasoline trucks. The comments further assert that EPA and the states have not followed a consistent practice in updating SIP modeling to account for changes in vehicle fleets. The comments also assert that EPA cannot rationally

⁸"Credit for the 15 Percent Rate-of-Progress Plans for Reductions from the Architectural and Industrial Maintenance (AIM) Coating Rule and the Autobody Refinishing Rule", November 29, 1994, John S. Seitz, Director OAQPS, to Air Division Directors, Regions I - X.

⁹"Regulatory Schedule for Consumer and Commercial Products under Section 183(e) of the Clean Air Act", June 22, 1995, John S. Seitz, Director OAQPS, to Air Division Directors, Regions I - X.

approve SIPs that are based on such materially inaccurate assumptions. The comments also assert continued use of out-dated assumptions is inconsistent with the duty imposed by Clean Air Act section 182(a)(3) to triennially update the emission inventory. The comments also assert that if the motor vehicle inventory has not been updated to prepare the current SIP submission, it should be disapproved.

Response: The Metropolitan Washington D.C. Ozone Nonattainment Area SIP is based on vehicle registration data from 1996, which is the most recent data available at the time the SIP was submitted. The SIP uses data current with or more recent than that used in 1996 periodic emission inventory. In Virginia, and Maryland the registration data comes from the 1996 actual vehicle data . Washington D.C. uses 1990 registration data that is aged to 1999 using an EPA approved method to estimate future year registration distributions based on the most recent actual local registrations, historical national scrappage rates, and projected national fleet growth

In the November 3, 1999, “Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations,” we state that, when developing motor vehicle emissions budgets, the MOBILE inputs (including vehicle fleet characteristics) should be appropriate and up-to-date as outlined in EPA’s guidance on SIP inventories and the MOBILE user’s guide. We are satisfied that the attainment SIP is based on the latest available information and therefore meets the existing guidance.

Comment: We received comments asserting that the SIP’s motor vehicle emissions budgets are inadequate because the SIP does not provide for attainment. The comments further assert that the SIP does not provide for sufficient emissions reductions.

Response: As described in the November 3, 1999 memorandum entitled “Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations,” there are circumstances in which we could find a SIP’s motor vehicle emissions budgets adequate even though additional emission reductions are necessary in order to demonstrate attainment.

Specifically, we indicated that motor vehicle emissions budgets could be adequate for conformity purposes if the area commits to adopt measures that will achieve the necessary additional reductions, and the area identifies a menu of possible measures that could achieve the reductions without requiring additional limits on highway construction. The District’s, Virginia’s, and Maryland’s SIPs for the Metropolitan Washington DC’s area contains such commitments and such a menu. The District, Maryland and Virginia reaffirmed commitments made in the Phase I plan in letters submitted to EPA on: January 6, 2000 for the District; December 22, 1999 for Virginia; and December 28, 1999 for Maryland. The list of measures were identified in the SIP accompanying the revised budgets submitted on February 16, 2000 for the District; February 9, 2000 for Virginia; and February 14, 2000 for Maryland.

We believe that we can find the Metropolitan Washington DC budgets for the District, Virginia, and Maryland adequate because the budgets will not interfere with the area’s ability to adopt additional measures to attain. Because the additional measures do not involve additional limits on highway construction, allowing new transportation investments to proceed consistent with the

budgets will not prevent the area from achieving the additional reductions it needs. While the area is adopting its additional measures, the SIP's budgets will cap motor vehicle emissions and thereby ensure that the amount of additional reductions necessary to demonstrate attainment will not increase.

Comment: We received comments asserting that the motor vehicle emissions budgets are inadequate because they do not provide for all reasonably available control measures to attain the standard as expeditiously as practicable.

Response: Our adequacy criteria in 40 CFR 93.118(e) do not require that the SIP include reasonably available control measures in order for the motor vehicle emissions budgets to be adequate for conformity purposes. Our adequacy review, which is a cursory review process prior to the full approval/disapproval of the SIP, is focused on whether the motor vehicle emissions budgets are part of an overall strategy that is consistent with attainment, and whether the emissions budgets are calculated correctly. As long as the motor vehicle emissions budgets are consistent with attainment, we believe they are adequate for conformity's purpose of preventing new or worsened violations. The area's choice of measures to reach attainment does not affect whether the motor vehicle emissions budgets are adequate for conformity purposes.

Furthermore, our adequacy criteria do not require that EPA definitively conclude that motor vehicle emissions budgets provide for attainment as expeditiously as practicable. In order for the budgets to be adequate for conformity purposes, EPA must simply conclude that the SIP appears to provide for timely attainment, and could meet this test where the SIP provides for attainment by the statutory date or the date provided by bump-up or extension. The cursory adequacy review does not provide an opportunity for us to review and consider all possible measures that could have been adopted to achieve attainment more expeditiously. For the purposes of the adequacy review, which is less extensive than our approval/disapproval action, we consider that the motor vehicle emissions budgets do not delay timely attainment as long as they are consistent with a control strategy that provides for attainment by the statutory date or the date provided by bump-up or extension.

Further, EPA believes that the magnitude of measures associated with the attainment demonstration and the time needed for state adoption and implementation of such measures makes it practically unlikely that the attainment date could be advanced. EPA preliminarily concludes that the SIP provides for attainment as expeditiously as practicable because a significant number of measures in the attainment demonstration can not practicably be adopted and implemented prior to the identified attainment date. EPA preliminarily concludes that no group of additional measures could practicably be adopted and implemented in sufficient time to advance that attainment date.

Therefore, EPA concludes that the budgets in the attainment demonstration are adequate because they are consistent with a demonstration that EPA preliminarily concludes includes sufficient RACM to provide for attainment as expeditiously as practicable.

Comment: We have received comments saying that the (Transportation) model does not

incorporate adequate assumptions about the effects of land development and new road projections on the growth of vehicle travel and cites and EPA Region 3 letter that proposes to verify these statements. The comments that we received discuss the transportation model's land use assumptions, and imply that the Metropolitan Planning Organization (the Metropolitan Washington Council of Governments, MWCOG) (hereafter, "the MPO") has not included the effects of landuse in the model and that EPA has known about this issue since 1998

Response: The Conformity Rule § 93.110 (a) & (b) states that the conformity determination must be based on the most recent planning assumptions in force at the time of the conformity determination. Planning assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO. Based on EPA reviews of the most recently approved Transportation Improvement programs (TIPs) as well as the Long Range Transportation Plans in the Washington, D.C. area, we are satisfied that the MPO through its land activity forecasts, provides timely information on growth and land use, through consultation with all of its regional county planners. Therefore, while the estimates of landuse activity are not done by modeling, their process of estimating landuse activity does not violate the requirements of the rule, and therefore we can find no reason to agree with any assertion or implication that the transportation model, used by the MPO to develop the SIP budgets, is deficient. Furthermore, EPA's 1998 letter to the MPO does not have any relevance in this instance because the letter targets the lack of any clear graphic display of information in the transportation plans rather than the absence of information for the transportation model to use.

Comment: We have received comments saying that the temperature assumed in the mobile source modeling inputs was 93 degrees (Fahrenheit), yet the maximum recorded temperatures for those days during which peak ozone values were recorded were higher (96 to 98 degrees).

Response: EPA disagrees with the comment that this is a reason to determine that the budgets are inadequate. EPA guidance on projecting future mobile source emissions inventories requires the States to use the temperatures representative of a "typical ozone season day". See section 3.3.5.2 of Procedures for Emission Inventory Preparation Volume IV: Mobile Sources, EPA-450/4-81-026d (Revised), 1992 which also sets the procedure for determining the temperature for the 1990 base year and all subsequent projection inventories. The typical ozone season day conditions are those used when determining the typical daily emissions for the 1990 base year emissions inventory. For 1990 inventories, the period to be used for temperature determination was 1988-1990. The same typical season day is also used when setting target levels of emissions in ROP plans.

Comment: We have received comments saying that the emission reduction credits claimed by Maryland's, Virginia's and the District's in the revised Phase II SIP from its regulations are not supported by adequate documentation. The comments that we have received cite an eighty percent (80%) compliance rate used in determination of the benefits from the open burning regulations.

Response: As previously discussed, the process of making adequacy findings for budgets is

separate from the detailed review of the technical analyses provided by a state when EPA is conducting rulemaking to approve or disapprove submitted ROP and attainment plans as SIP revisions. The eighty percent rule compliance factor is used by the States account for rule effectiveness¹⁰. The purpose of rule effectiveness is to provide a better estimate of the actual emissions in recognition of the fact that it is impossible to ensure 100 percent effectiveness of the rules (i.e., meeting the rule target with 100 percent of the sources 100 percent of the time). EPA allows the use of an 80 percent default value for rule effectiveness. For purposes of making adequacy findings on these budgets, EPA believes that the data used by Maryland, Virginia and the District to calculate the reductions from the various measures is reliable and that the reductions as claimed are reasonable.

Comment: We have received comments that say that EPA must propose a finding of adequacy in the Federal Register and allow public comment thereon.

Response: EPA disagrees that a finding of adequacy must be proposed in the Federal Register. See 62 FR at 43782 to 43783, August 15, 1997. EPA has followed the procedure laid out in a May 14, 1999, Gay MacGregor, Director, Regional and State Programs Division, Office of Mobile Sources, memorandum entitled “Conformity Guidance on Implementation of March 2, 1999 Conformity Court Decision.” This procedure provides for a 30-day public comment period.

¹⁰ Procedures for Preparing Emissions Projections, EPA-450/4-91-019, July 1991

III. Evaluation of the Budgets

Budgets for the year 2015: VOC: 107.2 tons/day NOx: 130 tons/day

Budgets for the year 2020: VOC: 116.0 tons/day NOx: 130 tons/day

Table 1

Adequacy of the Out-Year Budgets for the Attainment Plan Submitted for the Metropolitan Washington, D.C. Ozone Nonattainment Area

| Transportation Conformity Rule 40 CFR Part 93, § 93.118 | Review Criteria | Was the Criterion Satisfied? If "Yes" How was this Criteria Satisfied? (Reference SIP Document/Comments if required) |
|--|---|--|
| Sec. 93.118(e)(4)(i) | Was the submitted revised plan endorsed by the Governor (or his or her designee) and subject to a State public hearing? | Yes. The submitted attainment demonstration was endorsed by the Governor (or his or her designee) and a public hearing was held. |
| Sec. 93.118(e)(4)(ii) | Before the attainment demonstration was submitted to EPA, did consultation among federal, State and local agencies occur; was full implementation plan documentation provided to EPA, and was EPA's stated concerns, if any, addressed? | Yes. Consultation has occurred between all required federal, state and local agencies. |
| Sec. 93.118(e)(4)(iii) | Was the motor vehicle emissions budget(s) clearly identified and precisely quantified? | Yes. |

| | | |
|------------------------------|--|---|
| <p>Sec. 93.118(e)(4)(iv)</p> | <p>Is the motor vehicle emissions budget(s), when considered together with all other emission reductions, consistent with applicable requirements for attainment demonstrations?</p> | <p>Yes, as per the November 3, 1999 guidance from Merrylin Zaw-Mon referenced in Section I, the budgets can be declared adequate based upon the commitments that the District, Virginia, and Maryland reaffirmed in January 6, 2000, December 22, 1999, and December 28, 1999 respectively. Guidance on NOx/VOC substitution (memorandum dated January 10, 2000 from G. T. Helms to Marcia Spink entitled, "Substitution of Nitrogen Oxide (NOx) Emission Reductions in Out-Year Conformity Budgets") was followed.</p> |
| <p>Sec. 93.118(e)(4)(v)</p> | <p>Is the motor vehicle emissions budget(s) consistent with and clearly related to the emissions inventory and the control measures in the submitted attainment demonstration?</p> | <p>Yes, the motor vehicle emissions budgets are consistent with and clearly related to the emissions inventory and the control measures in the submitted attainment demonstration.</p> |

| | | |
|-----------------------|---|--|
| Sec. 93.118(e)(4)(vi) | Revisions to previously submitted attainment demonstrations: explain and document any changes to previously submitted budgets and control measures; impacts on point and area source emissions; any changes to established safety margins (see Sec. 93.101 for definition); and reasons for the changes (including the basis for any changes related to emission factors or estimates of vehicle miles traveled). | Yes. The plan explains that the additional budgets are established for the purposes of Conformity Determinations for years beyond the attainment year. |
| Sec. 93.118(e)(5) | Did they provide and we review public comments and the State's responses to those comments with the submitted control strategy SIP? | Yes |

IV. Special Considerations: NOx/VOC Substitution

These out-year budgets for 2015 and 2020 have been established to allow future Transportation Improvement Programs and Long Range Transportation Plans for the Washington D.C. area to demonstrate conformity. The establishment of these out-year budgets employs NOx substitution from emission reductions available from the Tier 2/Sulfur Rulemaking in 2015 and in 2020. Specifically, some of the NOx emission reductions from the Tier 2/Sulfur Rulemaking not needed in the 2015 and 2020 NOx budgets for transportation conformity purposes were substituted for increases in the VOC budgets. The establishment of these out-year budgets which employ NOx substitution is consistent with an EPA memorandum dated January 10, 2000 from G. T. Helms to Marcia Spink entitled, "Substitution of Nitrogen Oxide (NOx) Emission Reductions in Out-Year Conformity Budgets."

V. Recommendation

We recommend that the motor vehicle budgets established for the out-years 2015 and 2020 in the revised Phase II Attainment Plans for the Metropolitan Washington D.C., Ozone Nonattainment Area, submitted on March 22, 2000 by the District of Columbia, March 31, 2000 by Virginia, and March 31, 2000 by Maryland, be found adequate.

We base this recommendation:

1. Upon our review and evaluation of these out-year budgets established in the revised Phase II Attainment Plans and upon the commitment letters submitted on January 6, 2000 by the District, December 22, 1999 by Virginia, and December 28, 1999 by Maryland;
2. Upon the May 31, 2000 adequacy findings on the budgets for the year 2005 contained in the revised Phase II Attainment plan for the Metropolitan Washington D.C. Ozone Nonattainment Area submitted by the District of Columbia, Maryland, and Virginia on February 16, 2000, February 14, 2000, and February 9, 2000, respectively; and
3. Upon our evaluation that the NOx/VOC substitution guidance was properly followed to establish these out-year budgets.