

disapproval of the State submittal does not affect State-enforceability. Moreover EPA's disapproval of the submittal would not impose any new Federal requirements. Therefore, I certify that the proposed disapproval would not have a significant impact on a substantial number of small entities.

#### F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 ("Unfunded Mandates Act"), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated annual costs to State, local, or tribal governments in the aggregate; or to private sector, of \$100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

EPA has determined that the proposed approval action does not include a Federal mandate that may result in estimated annual costs of \$100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

Sections 202 and 205 do not apply to the proposed disapproval because the proposed disapproval of the SIP submittal would not, in and of itself, constitute a Federal mandate because it would not impose an enforceable duty on any entity. In addition, the Act does not permit EPA to consider the types of analyses described in section 202 in determining whether a SIP submittal meets the CAA. Finally, section 203 does not apply to the proposed disapproval because it would affect only the Commonwealth of Pennsylvania, which is not a small government.

#### G. National Technology Transfer and Advancement Act

Section 12 of the National Technology Transfer and Advancement Act (NTTAA) of 1995 requires Federal agencies to evaluate existing technical standards when developing new regulations. To comply with NTTAA, the EPA must consider and use "voluntary consensus standards" (VCS)

if available and applicable when developing programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical.

EPA believes that VCS are inapplicable to this action. Today's action, proposing approval of Pennsylvania's One-Hour Ozone Attainment Demonstration for the Philadelphia-Wilmington-Trenton Ozone Nonattainment Area, does not require the public to perform activities conducive to the use of VCS.

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Hydrocarbons, Nitrogen dioxide, Ozone.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: November 30, 1999.

**Thomas C. Voltaggio,**

*Acting Regional Administrator, Region III.*

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### ENVIRONMENTAL PROTECTION AGENCY

#### 40 CFR Part 52

[DE038-1028; FRL-6502-7]

#### Approval and Promulgation of Air Quality Implementation Plans; Delaware; One-Hour Ozone Attainment Demonstration for the Philadelphia-Wilmington-Trenton Ozone Nonattainment Area

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The EPA is proposing to approve the State Implementation Plan (SIP) consisting of the 1-hour ozone attainment demonstration for the Philadelphia-Wilmington-Trenton severe nonattainment area (the Philadelphia area) submitted by the Delaware Department of Natural Resources and Environmental Control (DNREC) on May 22, 1998 and October 8, 1998. We are also proposing, in the alternative, to disapprove this demonstration if Delaware does not submit an adequate motor vehicle emissions budget for its portion of the Philadelphia area consistent with attainment and adopt and submit rules for the regional NO<sub>x</sub> reductions consistent with the modeling demonstration. For purposes of an adequate motor vehicle emissions budget, the State will need to reaffirm that its previously submitted enforceable commitment to adopt the

measures needed for attainment would apply to the additional measures to reduce emissions to support the attainment test. The reaffirmation must also include the State's commitment to the performance of a mid-course review and to revisions to the SIP and motor vehicle emissions budget after MOBILE6 (the most recent model for estimating mobile source emissions) is released. The Philadelphia area is comprised of two counties in Delaware (namely Kent and New Castle Counties), one county in Maryland, seven counties in New Jersey, and five counties in Pennsylvania. Elsewhere in today's **Federal Register**, we are also proposing to take action on the 1-hour ozone attainment demonstration SIPs from Maryland, New Jersey, and Pennsylvania for the Philadelphia area.

**DATES:** Written comments must be received on or before February 14, 2000.

**ADDRESSES:** Written comments may be mailed to David L. Arnold, Chief, Ozone & Mobile Sources Branch, Mailcode 3AP21, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the documents relevant to this action are available for public inspection during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103; Delaware Department of Natural Resources & Environmental Control, 89 Kings Highway, Dover, Delaware 19901.

**FOR FURTHER INFORMATION CONTACT:** Rose Quinto, (215) 814-2182, or by e-mail at [quinto.rose@epa.gov](mailto:quinto.rose@epa.gov).

**SUPPLEMENTARY INFORMATION:** This document provides background information on attainment demonstration SIPs for the 1-hour ozone national ambient air quality standard (NAAQS) and an analysis of the 1-hour ozone attainment demonstration SIP submitted by DNREC for the Delaware portion of the Philadelphia area. This document addresses the following questions:

- What Is The Basis For The Attainment Demonstration SIP?
- What Are The Components Of A Modeled Attainment Demonstration?
- What Is The Frame Work For Proposing Action On The Attainment Demonstration SIPs?
- What Does EPA Expect To Happen With Respect To Attainment Demonstrations For The Severe 1-Hour Ozone Nonattainment Areas?
- What Are The Relevant Policy And Guidance Documents?
- How Does Delaware's Submittal Satisfy The Frame Work?
- What Are The Consequences Of State Failure?

## I. Background

### A. What is the Basis for the Attainment Demonstration SIP?

#### 1. CAA Requirements

The Clean Air Act (CAA) requires EPA to establish national ambient air quality standards (NAAQS or standards) for certain widespread pollutants that cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. CAA sections 108 and 109. In 1979, EPA promulgated the 1-hour 0.12 parts per million (ppm) ground-level ozone standard. 44 FR 8202 (Feb. 8, 1979). Ground-level ozone is not emitted directly by sources. Rather, emissions of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) react in the presence of sunlight to form ground-level ozone. NO<sub>x</sub> and VOC are referred to as precursors of ozone.

An area exceeds the 1-hour ozone standard each time an ambient air quality monitor records a 1-hour average ozone concentration above 0.124 ppm. An area is violating the standard if, over a consecutive three-year period, more than three exceedances are expected to occur at any one monitor. The CAA, as amended in 1990, required EPA to designate as nonattainment any area that was violating the 1-hour ozone standard, generally based upon air quality monitoring data from the three-year period from 1987–1989. CAA section 107(d)(4); 56 FR 56694 (Nov. 6, 1991). The CAA further classified these areas, based upon the area's design value, as marginal, moderate, serious, severe or extreme. CAA § 181(a). Marginal areas were suffering the least significant air pollution problems while the areas classified as severe and extreme had the most significant air pollution problems.

The control requirements and dates by which attainment needs to be achieved vary with the area's classification. Marginal areas are subject to the fewest mandated control requirements and have the earliest attainment date. Severe and extreme areas are subject to more stringent planning requirements but are provided more time to attain the standard. Serious areas are required to attain the 1-hour standard by November 15, 1999 and severe areas are required to attain by November 15, 2005 or November 15, 2007. The Philadelphia area is classified as severe and its attainment date is 2005.

Under section 182(c)(2) and (d) of the CAA, serious and severe areas were required to submit by November 15, 1994 demonstrations of how they would

attain the 1-hour standard and how they would achieve reductions in VOC emissions of 9 percent for each three-year period until the attainment year (rate-of-progress or ROP). In some cases, NO<sub>x</sub> emission reductions can be substituted for the required VOC emission reductions. Today, in this proposed rule, EPA is proposing action on the attainment demonstration SIP submitted by Christopher A.G. Tulou, Secretary of Delaware DNREC for the Philadelphia area. EPA is also proposing action on the State's commitment to submit ROP target calculations and the adopted measures to achieve ROP by December 2000; and take action on the State's ROP plan in a separate rulemaking action. In addition, elsewhere in this **Federal Register**, EPA is today proposing to take action on nine other serious or severe 1-hour ozone attainment demonstration SIPs. The additional nine areas are Greater Connecticut (CT), Springfield (Western Massachusetts) (MA), New York-North New Jersey-Long Island (NY-NJ-CT), Baltimore (MD), Metropolitan Washington D.C. (DC-MD-VA), Atlanta (GA), Milwaukee-Racine (WI), Chicago-Gary-Lake County (IL-IN), and Houston-Galveston-Brazoria (TX).

In general, an attainment demonstration SIP includes a modeling analysis component showing how the area will achieve the standard by its attainment date and the control measures necessary to achieve those reductions. Another component of the attainment demonstration SIP is a motor vehicle emissions budget for transportation conformity purposes. Transportation conformity is a process for ensuring that States consider the effects of emissions associated with new or improved federally-funded roadways on attainment of the standard. As described in section 176(c)(2)(A), attainment demonstrations necessarily include the estimates of motor vehicle emissions that are consistent with attainment, which then act as a budget or ceiling for the purposes of determining whether transportation plans and projects conform to the attainment SIP.

#### 2. History and Time Frame for the State's Attainment Demonstration SIP

Notwithstanding significant efforts by the States, in 1995 EPA recognized that many States in the eastern half of the United States could not meet the November 1994 time frame for submitting an attainment demonstration SIP because emissions of NO<sub>x</sub> and VOCs in upwind States (and the ozone formed by these emissions) affected these nonattainment areas and the full

impact of this effect had not yet been determined. This phenomenon is called ozone transport.

On March 2, 1995, Mary D. Nichols, EPA's then Assistant Administrator for Air and Radiation, issued a memorandum to EPA's Regional Administrators acknowledging the efforts made by States but noting the remaining difficulties in making attainment demonstration SIP submittals.<sup>1</sup> Recognizing the problems created by ozone transport, the March 2, 1995 memorandum called for a collaborative process among the States in the eastern half of the country to evaluate and address transport of ozone and its precursors. This memorandum led to the formation of the Ozone Transport Assessment Group (OTAG)<sup>2</sup> and provided for the States to submit the attainment demonstration SIPs based on the expected time frames for OTAG to complete its evaluation of ozone transport.

In June 1997, OTAG concluded and provided EPA with recommendations regarding ozone transport. The OTAG generally concluded that transport of ozone and the precursor NO<sub>x</sub> is significant and should be reduced regionally to enable States in the eastern half of the country to attain the ozone NAAQS.

In recognition of the length of the OTAG process, in a December 29, 1997 memorandum, Richard Wilson, EPA's then Acting Assistant Administrator for Air and Radiation, provided until April 1998 for States to submit the following elements of their attainment demonstration SIPs for serious and severe nonattainment areas: (1) Evidence that the applicable control measures in subpart 2 of part D of title I of the CAA were adopted and implemented or were on an expeditious course to being adopted and implemented; (2) a list of measures needed to meet the remaining ROP emissions reduction requirement and to reach attainment; (3) for severe areas only, a commitment to adopt and submit target calculations for post-1999 ROP and the control measures necessary for attainment and ROP plans through the attainment year by the end of 2000<sup>3</sup>;

<sup>1</sup> Memorandum, "Ozone Attainment Demonstrations," issued March 2, 1995. A copy of the memorandum may be found on EPA's web site at <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

<sup>2</sup> Letter from Mary A. Gade, Director, State of Illinois Environmental Protection Agency to Environmental Council of States (ECOS) Members, dated April 13, 1995.

<sup>3</sup> Memorandum, "Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM 10 NAAQS," issued December 29, 1997. A copy of this

(4) a commitment to implement the SIP control programs in a timely manner and to meet ROP emissions reductions and attainment; and (5) evidence of a public hearing on the State submittal.<sup>4</sup> This submission is sometimes referred to as the Phase 2 submission. Motor vehicle emissions budgets can be established based on a commitment to adopt the measures needed for attainment and identification of the measures needed. Thus, States submissions due in April 1998 under the Wilson policy should have included a motor vehicle budget.

Building upon the OTAG recommendations and technical analyses, in November 1997, EPA proposed action addressing the ozone transport problem. In its proposal, the 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<sub>x</sub> emissions that significantly contribute to ozone transport. 62 FR 60318 (Nov. 7, 1997). The EPA finalized that rule in September 1998, calling on the 23 jurisdictions to revise their SIPs to require NO<sub>x</sub> emissions reductions within the State to a level consistent with a NO<sub>x</sub> emissions budget identified in the final rule. 63 FR 57356 (Oct. 27, 1998). This final rule is commonly referred to as the NO<sub>x</sub> SIP Call.

### 3. Time Frame for Taking Action on Attainment Demonstration SIPs for 10 Serious and Severe Areas

The States generally submitted the SIPs between April and October of 1998; some States are still submitting additional revisions as described below. Under the CAA, EPA is required to approve or disapprove a State's submission no later than 18 months following submission. (The statute provides up to 6 months for a

completeness determination and an additional 12 months for approval or disapproval.) EPA believes that it is important to keep the process moving forward in evaluating these plans and, as appropriate, approving them. Thus, in today's **Federal Register**, EPA is proposing to take action on the 10 serious and severe 1-hour ozone attainment demonstration SIPs (located in 13 States and the District of Columbia) and intends to take final action on these submissions over the next 6–12 months. The reader is referred to individual dates in this document for specific information on actions leading to EPA's final rulemaking on these plans.

### 4. Options for Action on the State's Attainment Demonstration SIP

Depending upon the circumstances unique to each of the 10 area SIP submissions on which EPA is proposing action today, EPA is proposing one or more of these types of approval or disapproval in the alternative. In addition, these proposals may identify additional action that will be necessary on the part of the State.

The CAA provides for EPA to approve, disapprove, partially approve or conditionally approve a State's plan submission. CAA section 110(k). The EPA must fully approve the submission if it meets the attainment demonstration requirement of the CAA. If the submission is deficient in some way, EPA may disapprove the submission. In the alternative, if portions of the submission are approvable, EPA may partially approve and partially disapprove, or may conditionally approve based on a commitment to correct the deficiency by a date certain, which can be no later than one year from the date of EPA's final conditional approval.

EPA may partially approve a submission if separable parts of the submission, standing alone, are consistent with the CAA. For example, if a State submits a modeled attainment demonstration, including control measures, but the modeling does not demonstrate attainment, EPA could approve the control measures and disapprove the modeling for failing to demonstrate attainment.

EPA may issue a conditional approval based on a State's commitment to expeditiously correct a deficiency by a date certain that can be no later than one year following EPA's conditional approval. Such commitments do not need to be independently enforceable because, if the State does not fulfill its commitment, the conditional approval is converted to a disapproval. For

example, if a State commits to submit additional control measures and fails to submit them or EPA determines the State's submission of the control measures is incomplete, EPA will notify the State by letter that the conditional approval has been converted to a disapproval. If the State submits control measures that EPA determines are complete or that are deemed complete, EPA will determine through rulemaking whether the State's attainment demonstration is fully approvable or whether the conditional approval of the attainment demonstration should be converted to a disapproval.

Finally, EPA has recognized that in some limited circumstances, it may be appropriate to issue a full approval for a submission that consists, in part, of an enforceable commitment. Unlike the commitment for conditional approval, such an enforceable commitment can be enforced in court by EPA or citizens. In addition, this type of commitment may extend beyond one year following EPA's approval action. Thus, EPA may accept such an enforceable commitment where it is infeasible for the State to accomplish the necessary action in the short term.

### B. What Are the Components of a Modeled Attainment Demonstration?

EPA provides that States may rely upon a modeled attainment demonstration supplemented with additional evidence to demonstrate attainment. In order to have a complete modeling demonstration submission, States should have submitted the required modeling analysis and identified any additional evidence that EPA should consider in evaluating whether the area will attain the standard.

#### 1. Modeling Requirements

For purposes of demonstrating attainment, the CAA requires serious and severe areas to use photochemical grid modeling or an analytical method EPA determines to be as effective.<sup>5</sup> The photochemical grid model is set up using meteorological conditions conducive to the formation of ozone. Emissions for a base year are used to

memorandum may be found on EPA's web site at <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

<sup>4</sup>In general, a commitment for severe areas to adopt by December 2000 the control measures necessary for attainment and ROP plans through the attainment year applies to additional measures necessary for attainment that were not otherwise required to be submitted earlier. (For example, this memorandum, was not intended to allow States to delay submission of measures required under the CAA, such as inspection and maintenance (I/M) programs or reasonable available control technology (RACT) regulations, required at an earlier time.) Thus, this commitment applies to any control measures or emission reductions on which the State relied for purposes of the modeled attainment demonstration. To the extent the State's submittal relies upon a commitment to submit these measures by December 2000, EPA is proposing approval of the area's attainment demonstration. Some severe areas submitted the actual adopted control measures and are not relying upon a commitment.

<sup>5</sup>The EPA issued guidance on the air quality modeling that is used to demonstrate attainment with the 1-hour ozone NAAQS. See U.S. EPA, (1991), Guideline for Regulatory Application of the Urban Airshed Model, EPA-450/4-91-013, (July 1991). A copy may be found on EPA's web site at <http://www.epa.gov/ttn/scram/> (file name: "UAMREG"). See also U.S. EPA, (1996), Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS, EPA-454/B-95-007, (June 1996). A copy may be found on EPA's web site at <http://www.epa.gov/ttn/scram/> (file name: "O3TEST").

evaluate the model's ability to reproduce actual monitored air quality values and to predict air quality changes in the attainment year due to the emission changes which include growth up to and controls implemented by the attainment year. A modeling domain is chosen that encompasses the nonattainment area. Attainment is demonstrated when all predicted concentrations inside the modeling domain are at or below the NAAQS or at an acceptable upper limit above the NAAQS permitted under certain conditions by EPA's guidance. When the predicted concentrations are above the NAAQS, an optional weight of evidence determination which incorporates, but is not limited to, other analyses, such as air quality and emissions trends, may be used to address uncertainty inherent in the application of photochemical grid models.

EPA guidance identifies the features of a modeling analysis that are essential to obtain credible results. First, the State must develop and implement a modeling protocol. The modeling protocol describes the methods and procedures to be used in conducting the modeling analyses and provides for policy oversight and technical review by individuals responsible for developing or assessing the attainment demonstration (State and local agencies, EPA Regional offices, the regulated community, and public interest groups). Second, for purposes of developing the information to put into the model, the State must select air pollution days, *i.e.*, days in the past with bad air quality, that are representative of the ozone pollution problem for the nonattainment area. Third, the State needs to identify the appropriate dimensions of the area to be modeled, *i.e.*, the domain size. The domain should be larger than the designated nonattainment area to reduce uncertainty in the boundary conditions and should include large upwind sources just outside the nonattainment area. In general, the domain is considered the local area where control measures are most beneficial to bring the area into attainment. Fourth, the State needs to determine the grid resolution. The horizontal and vertical resolutions in the model affect the dispersion and transport of emission plumes. Artificially large grid cells (too few vertical layers and horizontal grids) may dilute concentrations and may not properly consider impacts of complex terrain, complex meteorology, and land/water interfaces. Fifth, the State needs to generate meteorological data that describe atmospheric conditions and

emissions inputs. Finally, the State needs to verify that the model is properly simulating the chemistry and atmospheric conditions through diagnostic analyses and model performance tests. Once these steps are satisfactorily completed, the model is ready to be used to generate air quality estimates to support an attainment demonstration.

The modeled attainment test compares model-predicted 1-hour daily maximum concentrations in all grid cells for the attainment year to the level of the NAAQS. A predicted concentration above 0.124 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 attain the standard. This type of test is often referred to as an exceedance test. The EPA's guidance recommends that States use either of two modeled attainment or exceedance tests for the 1-hour ozone NAAQS: A deterministic test or a statistical test.

The deterministic test requires the State to compare predicted 1-hour daily maximum ozone concentrations for each modeled day<sup>6</sup> to the attainment level of 0.124 ppm. If none of the predictions exceed 0.124 ppm, the test is passed.

The statistical test takes into account the fact that the form of the 1-hour ozone standard allows exceedances. If, over a three-year period, the area has an average of one or fewer exceedances per year, the area is not violating the standard. Thus, if the State models a very extreme day, the statistical test provides that a prediction above 0.124 ppm up to a certain upper limit may be consistent with attainment of the standard. (The form of the 1-hour standard allows for up to three readings above the standard over a three-year period before an area is considered to be in violation.)

The acceptable upper limit above 0.124 ppm is determined by examining the size of exceedances at monitoring sites which meet the 1-hour NAAQS. For example, a monitoring site for which the four highest 1-hour average concentrations over a three-year period are 0.136 ppm, 0.130 ppm, 0.128 ppm and 0.122 ppm is attaining the standard. To identify an acceptable upper limit, the statistical likelihood of observing ozone air quality exceedances of the standard of various concentrations is equated to the severity of the modeled day. The upper limit generally represents the maximum ozone concentration observed at a location on

<sup>6</sup>The initial, "ramp-up" days for each episode are excluded from this determination.

a single day and it would be the only reading above the standard that would be expected to occur no more than an average of once a year over a three-year period. Therefore, if the maximum ozone concentration predicted by the model is below the acceptable upper limit, in this case 0.136 ppm, then EPA might conclude that the modeled attainment test is passed. Generally, exceedances well above 0.124 ppm are very unusual at monitoring sites meeting the NAAQS. Thus, these upper limits are rarely substantially higher than the attainment level of 0.124 ppm.

## 2. Additional Analyses Where Modeling Fails to Show Attainment

When the modeling does not conclusively demonstrate attainment, 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 modeling and its results. For example, there are uncertainties in some of the modeling inputs, such as the meteorological and emissions data bases for individual days and in the methodology used to assess the severity of an exceedance at individual sites. EPA's guidance recognizes these limitations, and provides a means for considering other evidence to help assess whether attainment of the NAAQS is likely. The process by which this is done is called a weight of evidence (WOE) determination.

Under a WOE determination, the State can rely upon and EPA will consider factors such as other modeled attainment tests, *e.g.*, a rollback analysis; other modeled outputs, *e.g.*, changes in the predicted frequency and pervasiveness of exceedances and predicted changes in the design value; actual observed air quality trends; estimated emissions trends; analyses of air quality monitored data; the responsiveness of the model predictions to further controls; and, whether there are additional control measures that are or will be approved into the SIP but were not included in the modeling analysis. This list is not an exclusive list of factors that may be considered and these factors could vary from case to case. EPA's guidance contains no limit on how close a modeled attainment test must be to passing to conclude that other evidence besides an attainment test is sufficiently compelling to suggest attainment. However, the further a modeled attainment test is from being passed, the more compelling the WOE needs to be.

EPA's 1996 modeling guidance also recognizes a need to perform a mid-

course review as a means for addressing uncertainty in the modeling results. Because of the uncertainty in long term projections, EPA believes a viable attainment demonstration that relies on WOE needs to contain provisions for periodic review of monitoring, emissions, and modeling data to assess the extent to which refinements to emission control measures are needed. The mid-course review is discussed in section I.C.6.

### *C. What is the Frame Work for Proposing Action on the Attainment Demonstration SIPs?*

In addition to the modeling analysis and WOE support demonstrating attainment, EPA has identified the following key elements which must be present in order for EPA to approve or conditionally approve the 1-hour attainment demonstration SIPs. These elements are listed below and then described in detail.

- CAA measures and measures relied on in the modeled attainment demonstration SIP. This includes adopted and submitted rules for all previously required CAA mandated measures for the specific area classification. This also includes measures that may not be required for the area classification but that the State relied on in the SIP submission for attainment and ROP plans on which EPA is proposing to take action on today.
- NO<sub>x</sub> reductions affecting boundary conditions.
- Motor vehicle emissions budget. A motor vehicle emissions budget which can be determined by EPA to be adequate for conformity purposes.
- Tier 2/Sulfur program benefits where needed to demonstrate attainment. Inclusion of reductions expected from EPA's Tier 2 tailpipe and low sulfur-in-fuel standards in the attainment demonstration and the motor vehicle emissions budget.
- In certain areas, additional measures to further reduce emissions to support the attainment test. Additional measures may be measures adopted regionally such as in the Ozone Transport Region (OTR), or locally (intrastate) in individual States.
- Mid-course review. An enforceable commitment to conduct a mid-course review and evaluation based on air quality and emission trends. The mid-course review would show whether the adopted control measures are sufficient to reach attainment by the area's attainment date, or that additional control measures are necessary.

### 1. CAA Measures and Measures Relied on in the Modeled Attainment SIP

The States should have adopted the control measures already required under the CAA for the area classification. Since these 10 serious and severe areas need to achieve substantial reductions from their 1990 emissions levels in order to attain, EPA anticipates that these areas need all of the measures required under the CAA to attain the 1-hour ozone NAAQS. In addition, the States may have included control measures in its attainment strategy that are in addition to measures required in the CAA. (For serious areas, these should have already been identified and adopted, whereas severe areas have until December 2000 to submit measures necessary to achieve ROP through the attainment year and to attain.) For purposes of fully approving the State's SIP, the State will need to adopt and submit all VOC and NO<sub>x</sub> controls within the local modeling domain that were relied on for purposes of the modeled attainment demonstration.

The following two tables present a summary of the CAA requirements that need to be met for each serious and severe nonattainment area for the 1-hour ozone NAAQS. These requirements are specified in section 182 of the CAA. Information on more measures that States may have adopted or relied on in their current SIP submissions is not shown in the tables. EPA will need to take final action approving all measures relied on for attainment, including the required ROP control measures and target calculations, before EPA can issue a final full approval of the attainment demonstration as meeting the CAA section 182(2)(d).

TABLE 1.—CAA REQUIREMENTS FOR SERIOUS AREAS

- NSR for VOC and NO<sub>x</sub>,<sup>1</sup> including an offset ratio of 1.2:1 and a major VOC and NO<sub>x</sub> source cutoff of 50 tons per year (tpy)
- Reasonable Available Control Technology (RACT) for VOC and NO<sub>x</sub><sup>1</sup>
- Enhanced Inspection and Maintenance (I/M) program
- 15% volatile organic compound (VOC) plans
- Emissions inventory
- Emission statements
- Attainment demonstration
- 9 percent ROP plan through 1999
- Clean fuels program or substitute
- Enhanced monitoring Photochemical Assessment Monitoring Stations (PAMS)
- Stage II vapor recovery

<sup>1</sup> Unless the area has in effect a NO<sub>x</sub> waiver under section 182(f). The Philadelphia area does not.

TABLE 2.—CAA REQUIREMENTS FOR SEVERE AREAS

- All of the nonattainment area requirements for serious areas
- NSR, including an offset ratio of 1.3:1 and a major VOC and NO<sub>x</sub> source cutoff of 25 tons per year (tpy)
- Reformulated gasoline
- 9 percent ROP plan through attainment year
- Requirement for fees for major sources for failure to attain (SIP due 12/31/2000)

### 2. NO<sub>x</sub> Reductions Affecting Boundary Conditions

The EPA completed final rulemaking on the NO<sub>x</sub> SIP call on October 27, 1998, which required States to address transport of NO<sub>x</sub> and ozone to other States. To address transport, the NO<sub>x</sub> SIP call established emissions budgets for NO<sub>x</sub> that 23 jurisdictions were required to show they would meet through enforceable SIP measures adopted and submitted by September 30, 1999. The NO<sub>x</sub> SIP call is intended to reduce emissions in upwind States that significantly contribute to nonattainment problems. The EPA did not identify specific sources that the States must regulate nor did EPA limit the States' choices regarding where to achieve the emission reductions. Subsequently, a three-judge panel of the Court of Appeals for the District of Columbia Circuit issued an order staying the portion of the NO<sub>x</sub> SIP call rule requiring States to submit rules by September 30, 1999.

The NO<sub>x</sub> SIP call rule establishes budgets for the States in which 9 of the nonattainment areas for which EPA is proposing action today are located. The 9 areas are: Greater Connecticut, Springfield MA, New York-North New Jersey-Long Island (NY-NJ-CT), Baltimore MD, Philadelphia-Wilmington-Trenton (PA-NJ-DE-MD), Metropolitan Washington, D.C. (DC-MD-VA), Atlanta GA, Milwaukee-Racine WI, and Chicago-Gary-Lake County (IL-IN).

Emission reductions that will be achieved through EPA's NO<sub>x</sub> SIP call will reduce the levels of ozone and ozone precursors entering nonattainment areas at their boundaries. For purposes of developing attainment demonstrations, States define local modeling domains that include both the nonattainment area and nearby surrounding areas. The ozone levels at the boundary of the local modeling domain are reflected in modeled attainment demonstrations and are referred to as boundary conditions. With the exception of Houston, the 1-hour attainment demonstrations on which

EPA is proposing action have relied, in part, on the NO<sub>x</sub> SIP Call reductions for purposes of determining the boundary conditions of the modeling domain. Emission reductions assumed in the attainment demonstrations are modeled to occur both within the State and in upwind States; thus, intrastate reductions as well as reductions in other States impact the boundary conditions. Although the court has indefinitely stayed the SIP submission deadline, the NO<sub>x</sub> SIP Call rule remains in effect. Therefore, EPA believes it is appropriate to allow States to continue to assume the reductions from the NO<sub>x</sub> SIP call in areas outside the local 1-hour modeling domains. If States assume control levels and emission reductions other than those of the NO<sub>x</sub> SIP call within their State but outside of the modeling domain, States must also adopt control measures to achieve those reductions in order to have an approvable plan.

Accordingly, States in which the nonattainment areas are located will not be required to adopt measures outside the modeling domain to achieve the NO<sub>x</sub> SIP call budgets prior to the time that all States are required to comply with the NO<sub>x</sub> SIP call. If the reductions from the NO<sub>x</sub> SIP call do not occur as planned, States will need to revise their SIPs to add additional local measures or obtain interstate reductions, or both, in order to provide sufficient reductions needed for attainment.

As provided above, any controls assumed by the State inside the local modeling domain<sup>7</sup> for purposes of the modeled attainment demonstration must be adopted and submitted as part of the State's 1-hour attainment demonstration SIP. It is only for reductions occurring outside the local modeling domain that States may assume implementation of NO<sub>x</sub> SIP call measures and the resulting boundary conditions.

### 3. Motor Vehicle Emissions Budget

The EPA believes that attainment demonstration SIPs must necessarily estimate the motor vehicle emissions that will be produced in the attainment year and demonstrate that this emissions level, when considered with emissions from all other sources, is consistent with attainment. The

estimate of motor vehicle emissions is used to determine the conformity of transportation plans and programs to the SIP, as described by CAA section 176(c)(2)(A). For transportation conformity purposes, the estimate of motor vehicle emissions is known as the motor vehicle emissions budget. The EPA believes that appropriately identified motor vehicle emissions budgets are a necessary part of an attainment demonstration SIP. A SIP cannot effectively demonstrate attainment unless it identifies the level of motor vehicle emissions that can be produced while still demonstrating attainment.

The EPA has determined that except for the Western MA (Springfield) attainment demonstration SIP, the motor vehicle emission budgets for all areas in today's proposals are inadequate or missing from the attainment demonstration. Therefore, EPA is proposing to disapprove the attainment demonstration SIPs for those nine areas if the States do not submit motor vehicle emissions budgets that EPA can find adequate by May 31, 2000.<sup>8</sup> In order for EPA to complete the adequacy process by the end of May, States should submit a budget no later than December 31, 1999.<sup>9</sup> If an area does not have a motor vehicle emissions budget that EPA can determine adequate for conformity purposes by May 31, 2000, EPA plans to take final action at that time disapproving in full the area's attainment demonstration. The emissions budget should reflect all the motor vehicle control measures contained in the attainment demonstration, i.e., measures already adopted for the nonattainment area as well as those yet to be adopted.

### 4. Tier 2/Sulfur Program Benefits

On May 13, 1999, EPA published a Notice of Proposed Rulemaking (NPRM) proposing a major, comprehensive program designed to significantly reduce emissions from passenger cars and light trucks (including sport-utility vehicles, minivans, and pickup trucks) and to reduce sulfur in gasoline. Under the proposed program, automakers

would produce vehicles designed to have very low emissions when operated on low-sulfur gasoline, and oil refiners would provide that cleaner gasoline nationwide. The EPA subsequently issued two supplemental notices. 64 FR 35112 (June 30, 1999); 64 FR 57827 (October 27, 1999). These two notices provide 1-hour ozone modeling and monitoring information that support EPA's belief that the Tier 2/Sulfur program is necessary to help areas attain the 1-hour NAAQS. Under the proposed rule, NO<sub>x</sub> and VOC emission reductions (as well as other reductions not directly relevant for attainment of the 1-hour ozone standard) would occur beginning in the 2004 ozone season although incentives for early compliance by vehicle manufacturers and refiners will likely result in some reductions prior to 2004. Nationwide, the Tier 2/Sulfur program is projected to result in reductions of approximately 800,000 tons of NO<sub>x</sub> per year by 2007 and 1,200,000 tons by 2010.

In the October 27, 1999 supplemental notice, EPA reported in Table 1 that EPA's regional ozone modeling indicated that 17 metropolitan areas for which the 1-hour standard applies need the Tier 2/Sulfur program reductions to help attain the 1-hour ozone standard. The Philadelphia area whose attainment demonstration EPA is proposing to approve today is included on that list.

The EPA issued a memorandum that provides estimates of the emissions reductions associated with the Tier 2/Sulfur program proposal.<sup>10</sup> The memorandum provides the tonnage benefits for the Tier 2/Sulfur program in 2007 on a county-by-county basis for all counties within the 10 serious and severe nonattainment areas for which EPA is proposing to take action today and the 2005 tonnage benefits for the Tier 2/Sulfur program for each county for three areas.

The EPA also issued a memorandum which explains the connection between the Tier 2/Sulfur program, motor vehicle Emissions budgets for conformity determinations, and timing for SIP revisions to account for the Tier 2/Sulfur program benefit.<sup>11</sup> This

<sup>7</sup> For the purposes of this document, "local modeling domain" is typically an urban scale domain with horizontal dimensions less than about 300 km on a side, horizontal grid resolution less than or equal to 5 x 5 km or finer. The domain is large enough to ensure that emissions occurring at 8 am in the domain's center are still within the domain at 8 pm the same day. If recirculation of the nonattainment area's previous day's emissions is believed to contribute to an observed problem, the domain is large enough to characterize this.

<sup>8</sup> For severe areas, EPA will determine the adequacy of the emissions budgets associated with the post-1999 ROP plans once the States submit the target calculations, which are due no later than December 2000.

<sup>9</sup> A final budget is preferred; but, if the State public hearing process is not yet complete, then the draft budget for public hearing may be submitted. The adequacy process generally takes at least 90 days. Therefore, in order for EPA to complete the adequacy process no later than the end of May, EPA must have by February 15, 2000, the final budget or a draft that is substantially similar to what the final budget will be. The State must submit the final budget by April 15, 2000.

<sup>10</sup> Memorandum, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking" from Lydia Wegman, Office of Air Quality Planning and Standards and Merrylin Zaw-Mon, Office of Mobile Sources to the Air Division Directors, Regions I-VI, issued November 8, 1999. A copy of this memorandum may be found on EPA's web site at <http://www.epa.gov/oms/transp/traqconf.htm>.

<sup>11</sup> Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations", from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I-VI, issued November 3, 1999. A copy of

memorandum explains that conformity analyses in serious and severe ozone nonattainment areas can begin including Tier 2/Sulfur program benefits once EPA's Tier 2 rule is promulgated, provided that the attainment demonstration SIPs and associated motor vehicle emissions budgets include the Tier 2 benefits. For areas that require all or some portion of the Tier 2 benefits to demonstrate attainment but have not yet included the benefits in the motor vehicle emissions budgets, EPA's adequacy finding will include a condition that conformity determinations may not take credit for Tier 2 until the SIP budgets are revised to reflect Tier 2 benefits. See EPA's memorandum for more information.

For the New York-North New Jersey-Long Island, Philadelphia-Wilmington-Trenton, Baltimore, Atlanta, and Houston nonattainment areas, the EPA is proposing to determine that additional emission reductions beyond those provided by the SIP submission are necessary for attainment. With the exception of the Atlanta nonattainment area, a portion of that reduction will be achieved by EPA's Tier 2/Sulfur program, which EPA expects to finalize shortly. States that need to rely in whole or in part on the Tier 2 benefits to help demonstrate attainment will need to adjust the demonstration for their SIP submission, emission inventories and motor vehicle emissions budgets to include the Tier 2/Sulfur program reductions in order for EPA to approve the SIP submittal. The submittal requirement including the analysis to make that submission is described in the two memoranda cited. States may use the tonnage benefits and guidance in these memoranda to make these adjustments to the SIP submission and motor vehicle emission budgets. The EPA encourages States to submit these SIP revisions by December 31, 1999 to allow EPA to include them in the motor vehicle emissions budget adequacy determinations which need to be completed by May 31, 2000. Alternatively, these revisions should be submitted by July 2000 for serious nonattainment areas, as EPA anticipates completing rulemaking on these SIPs in the fall of 2000. For severe nonattainment areas, these revisions should be submitted by December 31, 2000.

A number of areas for which the EPA is not proposing to determine that additional emission reduction beyond those provided by the SIP submission

are necessary for attainment will be taking a partial credit for Tier 2 when they use credit from national low emissions vehicles (NLEV) in their attainment demonstration. These nonattainment areas are the Milwaukee-Racine, Chicago-Gary-Lake County and Metropolitan Washington, D.C. areas. By regulation, the NLEV standards do not extend beyond the 2003 model year unless EPA promulgates Tier 2 vehicle standards at least as stringent as the NLEV standards. See 40 CFR 86.1701-99(c). Thus, the emission reductions relied upon from 2004 and later model year NLEV vehicles will actually be due to the promulgation of the Tier 2 standards, either through the extension of the NLEV program or a portion of the reduction from vehicles meeting the Tier 2 standards.

Like all the other SIPs that rely on Tier 2 reductions in order to demonstrate attainment, the attainment demonstrations for the Milwaukee-Racine, Chicago-Gary-Lake County and Metropolitan Washington, D.C. areas must be revised to estimate the effects of Tier 2 according to our policy before EPA can take final action approving such attainment demonstrations. Until the SIPs are revised to include full Tier 2 credit, EPA can determine by May 31, 2000 that a motor vehicle emissions budget is adequate if the budget would be otherwise adequate. No conditions need be placed on such adequacy determinations since the budgets in such SIPs already include reductions equivalent to the amount of emission reductions the areas will be relying on from Tier 2 by virtue of the NLEV reductions included in the budgets.

*Revisions to the Motor Vehicle Emissions Budget and the Attainment Demonstration When EPA Issues the MOBILE6 Model.* Within one year of when EPA issues the MOBILE6 model for estimating mobile source emissions which takes into account the emissions benefit of EPA's Tier 2/Sulfur program, States will need to revise their motor vehicle emissions budgets in their attainment demonstration SIPs if the Tier 2/Sulfur program is necessary for attainment. In addition, the budgets will need to be revised using MOBILE6 in those areas that do not need the Tier 2/Sulfur program for attainment but decide to include its benefits in the motor vehicle emissions budget anyway. The EPA will work with States on a case-by-case basis if the new emission estimates raise issues about the sufficiency of the attainment demonstration.

States described in the paragraph above will need to submit an enforceable commitment in the near

term to revise their motor vehicle emissions budget within one year after EPA's release of MOBILE6. This commitment should be submitted to EPA along with the other commitments discussed elsewhere in this notice, or alternatively, as part of the SIP revision that modifies the motor vehicle emission inventories and budgets to include the Tier 2/Sulfur program benefits needed in order for EPA to approve the SIP submittal.<sup>12</sup>

#### 5. In Certain Areas, Additional Measures to Further Reduce Emissions to Support the Attainment Test

EPA is proposing to find that the attainment demonstrations for New York-North New Jersey-Long Island; Baltimore; Philadelphia-Wilmington-Trenton; and Atlanta; even considering the Tier 2/Sulfur program reductions and the WOE, will not achieve attainment without the application of additional emission control measures to achieve additional emission reductions. Thus, for each of these areas, EPA has identified specific percentages of NO<sub>x</sub> and/or VOC emissions which must be reduced through additional control measures in order to demonstrate attainment and to enable EPA to approve the demonstration. The need for additional emission reductions is generally based on a lack of sufficient compelling evidence that the demonstration shows attainment at the current level of adopted or planned emission controls. This is discussed in detail below for the Philadelphia area. The method used by EPA to calculate the amount of additional reductions is described in a Technical Support Document (TSD) located in the record for this proposed rule. Briefly, the method makes use of the relationship between ozone and its precursors (VOC and NO<sub>x</sub>) to identify additional reductions that, at a minimum, would bring the model predicted future ozone concentration to a level at or below the standard. The relationship is derived by comparing changes in either (1) the model predicted ozone to changes in modeled emissions or (2) in observed air quality to changes in actual emissions.

EPA is not requesting that States perform new photochemical grid modeling to assess the full air quality impact of the additional measures that

<sup>12</sup> For purposes of conformity, the State needs a commitment that has been subject to public hearing. If the State has submitted a commitment that has been subject to public hearing and that provides for the adoption of all measures necessary for attainment, the State should submit a letter prior to December 31, 1999, amending the commitment to include the revision of the budget after the release of MOBILE6.



would be adopted. Rather, as described above, one of the factors that EPA can consider as part of the WOE analysis of the attainment demonstration is whether there will be additional emission reductions anticipated that were not modeled. Therefore, EPA will consider the reductions from these additional measures as part of the WOE analysis if the State adopts the measures or, as appropriate, submits an enforceable commitment to adopt the measures.

As an initial matter, for areas that need additional measures, the State must submit a commitment to adopt additional control measures to meet the level of reductions that EPA has identified as necessary for attainment. For purposes of conformity, if the State previously submitted a commitment, which has been subject to public hearing, to adopt the control measures necessary for attainment and ROP through the area's attainment date in conformance with the December 1997 Wilson policy, the State will not need an additional commitment at this time. However, the state will need to amend its commitment by letter to provide two things concerning the additional measures.

First, the State will need to identify a list of potential control measures (from which a set of measures could be selected) that when implemented, would be expected to provide sufficient additional emission reductions to meet the level of reductions that EPA has identified as necessary for attainment. States need not commit to adopt any specific measures on their list at this time, but if they do not do so, they must identify sufficient additional emission reductions to attain the standard with the submitted motor vehicle emissions budget. These measures may not involve additional limits on highway construction beyond those that could be imposed under the submitted motor vehicle emissions budget. (See memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations," from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I–VI<sup>13</sup>.) States may, of course, select control measures that do impose limits on highway construction, but if they do so, they must revise the budget to reflect the effects of specific, identified measures

that were either committed to in the SIP or were actually adopted. Otherwise, EPA could not conclude that the submitted motor vehicle emissions budget would be providing for attainment, and EPA could not find it adequate for conformity purposes.

Second, the letter should provide that the State will recalculate and submit a revised motor vehicle emissions budget that includes the effects, if any, of the measure or measures that are ultimately adopted when those measures are submitted as SIP revisions should any of the measures pertain to motor vehicles.

For purposes of approving the SIP, the State will need an enforceable commitment that identifies the date by which the additional measures will be submitted, identifies the percentage reductions needed of VOC and NO<sub>x</sub>, and provides that the State will recalculate and submit a revised motor vehicle emissions budget that includes the effects, if any, of the measure or measures that are ultimately adopted when these measures are submitted as SIP revisions should any of the measures pertain to motor vehicles. To the extent the State's current commitment does not include one of the above items or to the extent that a State plans to revise one of the above items in an existing commitment, the State will need a new public hearing.

For areas within the OTR, EPA believes it is appropriate to provide a State that is relying on a regional solution to a Congressionally-recognized regional air pollution problem with more time to adopt and submit measures for additional reductions to EPA than for a State that will rely on intrastate measures to achieve the reductions. Therefore, the EPA believes that States in the OTR must be allowed sufficient time for the OTR to analyze the appropriate measures as well as time for the State to adopt the measures. For these States, EPA believes it is appropriate for them to commit to work through the OTR to develop a regional strategy regarding the measures necessary to meet the additional reductions identified by EPA for these areas. However, as a backstop, the State will need to commit to adopt intrastate measures sufficient to achieve the additional reductions if the regional measures are not identified by the OTR and adopted by the relevant States. For purposes of conformity, if the State submitted a commitment consistent with the December 1997 Wilson policy and which has been subject to public hearing, the State may amend its current commitment by letter to provide these assurances. However, before EPA can take final rulemaking action to approve

the attainment demonstration, the State will need to meet the public hearing requirements for the commitment and submit it to EPA as a SIP revision. The EPA will have to propose and take final action on this SIP revision before EPA can fully approve the State's attainment demonstration. The State will have to submit the necessary measures themselves (and a revised motor vehicle emissions budget that includes the effects, if any, of the measure or measures that are ultimately adopted should any of the measures pertain to motor vehicles) as a SIP revision no later than October 31, 2001.

*Guidance on Additional Control Measures.* Much progress has been made over the past 25 years to reduce VOC emissions and over the past 9 years to reduce NO<sub>x</sub> emissions. Many large sources have been controlled to some extent through RACT rules or other emission standards or limitations, such as maximum achievable control technology (MACT), new source performance standards (NSPS) and the emission control requirements for NSR—lowest achievable emissions rate (LAER) and best achievable control technology (BACT). However, there may be controls available for sources that have not yet been regulated as well as additional means for achieving reductions from sources that have already been regulated. The EPA has prepared a report to assist States in identifying additional measures. This report is called "Serious and Severe Ozone Nonattainment Areas: Information on Emissions, Control Measures Adopted or Planned and Other Available Control Measures." The purpose of this report is to provide information to State and local agencies to assist them in identifying additional control measures that can be adopted into their SIPs to support the attainment demonstrations for the serious and severe nonattainment areas under consideration. This report has been added to the record for this proposal.

In summary, the report provides information in four areas. First, the report contains detailed information on emissions for ozone precursor emissions of NO<sub>x</sub> and VOCs. This inventory data gives an indication of where the major emissions are coming from in a particular geographic area and may indicate where it will be profitable to look for further reductions. Second, the report contains information on control measures for emission sources of NO<sub>x</sub> and VOC (including stationary, area and mobile source measures) for which controls may not have been adopted by many jurisdictions. This would include many measures listed among the control

<sup>13</sup>Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations", from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I–VI, issued November 3, 1999. A copy of this memorandum may be found on EPA's web site at <http://www.epa.gov/oms/transp/traqconf.htm>.



measures EPA considered when developing the Regulatory Impact Analysis (RIA) for promulgation of the 8-hour ozone NAAQS. Third, the report includes information on standards EPA has issued for the NSPS and MACT programs as well as information on alternative control techniques (ACT) documents. This may be useful to States who may already specify emission limits on existing source categories to which NSPS and MACT for new sources apply, but the current RACT level of control for these existing sources may not match the level specified in the NSPS or MACT standards for new sources or sources which emit hazardous air pollutants. Finally, the report includes information on the control measures not already covered elsewhere that States have adopted, or have proposed to adopt at the date of the report, into their SIPs. Comparison of information on measures already adopted into others' SIPs may help inform States about reductions that may be available from their sources whose emissions are currently not regulated.

Another source of information is the BACT and LAER determinations that States have made for individual new sources. Information on BACT/LAER determinations is available through EPA's RACT/BACT/LAER Clearinghouse (RBLC) which may be accessed on EPA's web site on the Internet at the following address: [www.epa.gov/ttn/catc/](http://www.epa.gov/ttn/catc/).

The ACT documents for VOC and NO<sub>x</sub> are valuable because EPA has not issued control technique guidelines (CTGs) that specify the level of RACT for several categories of sources. For some of these source categories, EPA has prepared ACT documents which describe various control technologies and associated costs for reducing emissions. While States were required to adopt RACT for major sources within these source categories, the ACT documents may identify an additional level of control for regulated sources or may provide control options for non-major sources within these source categories. States are free to evaluate the various options given and use the results to assist in formulating their own regulations.

The EPA report lists the various sources EPA used to develop the lists of additional measures. These sources include an EPA draft control measure data base, State and Territorial Air Pollution Administrators and the Association of Local Air Pollution Control Officials' (STAPPA/ALAPCO's) books "Controlling Nitrogen Oxides under the Clean Air Act: A Menu of Options", and "Meeting the 15-Percent

Rate-of-Progress Requirement Under the Clean Air Act: A Menu of Options", California's ozone SIP for the South Coast and various ACT documents.

There is one control approach which bears special mention because it is broader in application than any one specific control measure. There is the approach of "cap and trade." In this approach, a cap is placed on emissions, and existing sources are given emission allotments. Under a declining cap, emissions would be decreased each year. Sources may over-control and sell part of their allotments to other sources which under-control. Overall, the percentage decrease in emissions is maintained, but the reductions are made where they are most economical. A cap and trade program has been in operation in the South Coast Air Quality Management District in California since about 1992.

The State of Illinois has adopted a declining cap and trade program. The Illinois program will set a cap on future emissions of major sources in the Chicago area that in most cases is 12 percent lower than baseline emissions. Illinois will issue a number of emission allotments corresponding to the cap level and will require each source to have VOC emissions at or below the level for which it holds emission allotments. Trading of emission allotments will be allowed, so that sources that reduce VOC emissions more than 12 percent may sell emission allotments, and sources that reduce VOC emission less than 12 percent must buy emission allotments. The proposed reductions are planned to begin in the next ozone season, May 2000.

In addition, EPA's draft economic incentives program guidance (EIP) was proposed in September 1999. This encourages cost-effective and innovative approaches to achieving air pollution goals through emissions trading. Such an approach has been demonstrated to be successful and cost-effective in reducing air pollution in EPA's acid rain emissions trading program. These and other similar programs should allow cost-effective implementation of additional control measures.

Finally, a reduction in VOC and NO<sub>x</sub> emissions can be achieved through a wide range of control measures. These measures range from technology based actions such as retrofitting diesel trucks and buses, and controlling ground service equipment at airports to activity based controls such as increased use of transit by utilizing existing Federal tax incentives, market and pricing based programs, and ozone action days. States can also achieve emission reductions by implementing programs involving

cleaner burning fuels. The State of Texas is also considering a rule to change the times during the day in which construction can occur to reduce ozone precursor emissions during periods when ozone formation is occurring. There are a wide range of new and innovative programs beyond the few examples listed here. These measures, if taken together, can provide significant emission reductions for attainment purposes. In addition, a variety of mobile source measures could be considered as part of the commitment to meet the need for additional emission reduction measures.

## 6. Mid-Course Review

A mid-course review (MCR) is a reassessment of modeling analyses and more recent monitored data to determine if a prescribed control strategy is resulting in emission reductions and air quality improvements needed to attain the ambient air quality standard for ozone as expeditiously as practicable but no later than the statutory dates.

The EPA believes that a commitment to perform a MCR is a critical element of the WOE analysis for the attainment demonstration on which EPA is proposing to take action today. In order to approve the attainment demonstration SIP for the Philadelphia area, EPA believes that the States whose counties comprise the Philadelphia area, including Delaware, must submit an enforceable commitment to perform a MCR as described here.<sup>14</sup>

As part of the commitment, the State should commit to work with EPA in a public consultative process to develop a methodology for performing the MCR and developing the criteria by which adequate progress would be judged.

For severe areas, the States must have an enforceable commitment to perform the MCR, preferably following the 2003 ozone season, and to submit the results to EPA by the end of the review year (e.g., by December 31, 2003). EPA believes that an analysis in 2003 would be most robust since some or all of the regional NO<sub>x</sub> emission reductions should be achieved by that date. EPA would then review the results and determine whether any States need to adopt and submit additional control measures for purposes of attainment. The EPA is not requesting that States

<sup>14</sup> For purposes of conformity, the State needs a commitment that has been subject to public hearing. If the State has submitted a commitment that has been subject to public hearing and that provides for the adoption of all measures necessary for attainment, the State should submit a letter prior to December 31, 1999, amending the commitment to include the MCR.

commit now to adopt new control measures as a result of this process. It would be impracticable for the States to make a commitment that is specific enough to be considered enforceable. Moreover, the MCR could indicate that upwind States may need to adopt some or all of the additional controls needed to ensure an area attains the standard. Therefore, if EPA determines additional control measures are needed for attainment, EPA would determine whether additional emission reductions

as necessary from States in which the nonattainment area is located or upwind States, or both. The EPA would require the affected State or States to adopt and submit the new measures within a period specified at the time. The EPA anticipates that these findings would be made as calls for SIP revisions under section 110(k)(5) and, therefore, the period for submission of the measures would be no longer than 18 months after the EPA finding. A draft guidance document regarding the MCR process is

located in the docket for this proposal and may also be found on EPA's web site at <http://www.epa.gov/ttn/scram/>.

*D. In Summary, What Does EPA Expect To Happen With Respect to Attainment Demonstrations for the Severe 1-Hour Ozone Nonattainment Areas?*

The following table shows a summary of information on what EPA expects from States to allow EPA to approve the 1-hour ozone attainment demonstration SIPs.

TABLE 3.—SUMMARY SCHEDULE OF FUTURE ACTIONS RELATED TO ATTAINMENT DEMONSTRATION FOR THE PHILADELPHIA-WILMINGTON-TRENTON SEVERE NONATTAINMENT AREA IN PENNSYLVANIA AND WHICH IS LOCATED IN THE OTR

| Required no later than                            | Action   |
|---|--|
| 12/31/99 .....                                    | State submits the following to EPA:<br>—Motor vehicle emissions budget <sup>1</sup><br>—Commitments <sup>2</sup> or reaffirmation of a previous commitment to do the following:<br>—Submit by 10/31/01 measures for additional emission reductions as required in the attainment demonstration test; <sup>3</sup> for additional emission reduction measures developed through the regional process, the State must also submit a commitment for the additional measures and a backstop commitment to adopt and submit by 10/31/01 intrastate measures for the emission reductions in the event the OTR process does not recommend measures that produce emission reductions.<br>—Submit revised SIP and motor vehicle emissions budget by 10/31/01 if additional measures (due by 10/31/01) affect the motor vehicle emissions inventory.<br>—Revise SIP and motor vehicle emissions budget 1 year after MOBILE6 is issued.<br>—Perform a mid-course review.<br>—A list of potential control measures that could provide additional emission reductions needed to attain the standard. <sup>4</sup> |
| 4/15/00 .....                                     | State submits in final any submissions made in draft by 12/31/99.  |
| Before EPA final rulemaking .....                 | State submit enforceable commitments for any above-mentioned commitments that may not yet have been subjected to public hearing.   |
| 12/31/00 .....                                    | —State submits adopted modeled measures relied on in attainment demonstration or relied upon for ROP through the attainment year.<br>—State revises and submits SIP and motor vehicle emissions budget to account for Tier 2 reductions as needed <sup>5</sup> .   |
| 10/31/01 .....                                    | —OTR States submit additional measures developed through regional process or intrastate measures.<br>—State revises SIP and motor vehicle emissions budget if the additional measures are for motor vehicle category.  |
| Within 1 yr. after release of MOBILE6 model ..... | State submits revised SIP and motor vehicle emissions budget based on MOBILE6.   |
| 12/31/03 .....                                    | State submits to EPA results of mid-course review.   |

<sup>1</sup> Final budget preferable; however, if public process is not yet complete, then a "draft" budget (the one undergoing public process) may be submitted at this time with a final budget by 4/15/00. However, if a final budget is significantly different from the draft submitted earlier, the final budget must be submitted by 2/15/00 to accommodate the 90-day processing period prior to the 5/31/00 date by which EPA must find the motor vehicle emissions budget adequate. Note that the budget can reflect estimated Tier 2 emission reductions—see memorandum from Lydia Wegman and Merrylin Zaw-Mon, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking."

<sup>2</sup> As provided in the preamble text, the State may clarify by letter an existing commitment, which has been subject to public hearing, to submit the control measures needed for attainment. If the State has not yet submitted such a commitment, the State should adopt a commitment after public hearing. If the public hearing process is not yet complete, then draft commitments may be submitted at this time. The final commitment should be submitted no later than 4/15/00.

<sup>3</sup> The revision for MOBILE6 is only required for SIPs that include the effects of Tier 2. The commitment to revise the SIP after MOBILE6 may be submitted at the same time that the state submits the budget that includes the effects of Tier 2 (no later than 12/31/00).

<sup>4</sup> The State is not required to commit to adopt any specific measures. However, if the State does not do so, the list cannot include any measures that place limits on highway construction.

<sup>5</sup> If the state submits such a revision, it must be accompanied by a commitment to revise the SIP and motor vehicle emissions budget 1 year after MOBILE6 is issued (if the commitment has not already been submitted).

*E. What are the Relevant Policy and Guidance Documents?*

This proposal has cited several policy and guidance memoranda. The EPA has also developed several technical documents related to the rulemaking action in this proposal. Some of the documents have been referenced above. The documents and their location on

EPA's web site are listed below; these documents will also be placed in the docket for this proposal action.

Recent Documents

1. "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>.

2. "Serious and Severe Ozone Nonattainment Areas: Information on Emissions, Control Measures Adopted or Planned and Other Available Control

Measures." Draft Report. November 3, 1999. Ozone Policy and Strategies Group. U.S. EPA, RTP, NC.

3. Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Attainment Demonstration," from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I–VI. November 3, 1999. Web site: <http://www.epa.gov/oms/transp/traqconf.htm>.

4. Memorandum from Lydia Wegman and Merrylin Zaw-Mon to the Air Division Directors, Regions I–VI, "1-Hour Ozone Attainment Demonstrations and Tier 2/Sulfur Rulemaking". November 8, 1999. Web site: <http://www.epa.gov/oms/transp/traqconf.htm>.

5. Draft Memorandum, "1-Hour Ozone NAAQS—Mid-Course Review Guidance." From John Seitz, Director, Office of Air Quality Planning and Standards. Web site: <http://www.epa.gov/ttn/scram>.

6. Memorandum, "Guidance on Reasonably Available Control Measures (RACM) Requirement and Attainment Demonstration Submissions for Ozone Nonattainment Areas." John S. Seitz, Director, Office of Air Quality Planning and Standards. November 30, 1999. Website: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

#### Previous Documents

1. U.S. EPA, (1991), Guideline for Regulatory Application of the Urban Airshed Model, EPA-450/4-91-013, (July 1991). Web site: <http://www.epa.gov/ttn/scram/> (file name: "UAMREG").

2. U.S. EPA, (1996), Guidance on Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS, EPA-454/B-95-007, (June 1996). Web site: <http://www.epa.gov/ttn/scram/> (file name: "O3TEST").

3. Memorandum, "Ozone Attainment Demonstrations," from Mary D. Nichols, issued March 2, 1995. Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

4. Memorandum, "Extension of Attainment Dates for Downwind Transport Areas," issued July 16, 1998. Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

5. December 29, 1997 Memorandum from Richard Wilson, Acting Assistant Administrator for Air and Radiation "Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM<sub>10</sub> NAAQS." Web site: <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

## II. EPA's Review and Analysis of Delaware's Submittal

This section provides a review of DNREC's submittal and an analysis of how it satisfies the frame work

discussed in section I.C. of this document. A more detailed description of the Delaware submittal and EPA's evaluation are included in a TSD prepared in support of this rulemaking action.

### A. Analysis of the Local Modeling and Weight-of-Evidence

#### 1. Analysis of the Modeling for the Local Modeling Domain

The CAA requires that serious areas and above perform photochemical grid modeling to help determine the emission reductions of VOCs and NO<sub>x</sub> necessary to achieve the attainment of the 1-hour ozone standard. DNREC fulfilled this requirement through the application of the Urban Airshed Model, Version 4 (UAM-IV) and through the use of the modeling results from the OTAG application of the Urban Airshed Model, Version 5 (UAM-V).

The ozone attainment demonstration for the Philadelphia area contains local scale modeling that, other than the number of episodes modeled, fulfills EPA recommended modeling procedures. EPA modeling guidance requires that a total of three episodes be modeled from at least two meteorological regimes. Modeling was performed for two episodes (July 7–8, 1988 & July 18–20, 1991) in the Philadelphia area. Given the severe nature of the episodes modeled, even if three episodes were modeled, the two episodes that were modeled would most likely be the controlling episodes in the determination of the emission reductions needed in the Philadelphia area for attainment. The two episodes that were modeled also represent the most frequently occurring meteorological conditions conducive to high ozone in the Philadelphia area. When the 2005 emission inventory with the control strategy is modeled, peak ozone concentration is reduced by approximately 31 ppb from the modeled peak concentrations in the 1988 and 1991 base cases. When this reduction is applied to the peak measured concentration for the July 1991 episode (155 ppb), the resulting concentration is 124 ppb which indicates attainment.

The local modeling for the Philadelphia area over-predicts ozone concentrations for the July 1991 episode. The modeling predicts peak concentrations in the Philadelphia area plume of between 156–190 ppb while ozone monitors in the same area during the same time period show a peak concentration of 151 ppb. This indicates that the model is over-predicting the actual concentration by an average of 15%. When model over-prediction is

accounted for in the July 1991 episode, the local-scale modeling predicts a peak concentration of 127 ppb. In this case, EPA's alternative attainment test guidance entitled "Guidance on the Use of Modeled Results to Demonstrate Attainment of the Ozone NAAQS" will allow a peak concentration of 141 ppb and still consider the modeled result attainment due to the severity of the meteorological ozone forming potential of the episode day. The local modeling for the July 1998 episode does not over-predict ozone concentrations. Modeled peak concentrations for the July 1998 episode exceed levels consistent with attainment. Therefore, it is necessary to warrant the consideration of WOE arguments that support the demonstration of attainment.

The attainment emission control strategy contained in the Delaware's attainment demonstration, when combined with the control strategies being implemented in the other states that are part of the Philadelphia area, results in the improvement in the number of grid cell hours above the standard between 81–85 percent. This result satisfies the requirement of the second bench mark of the Statistical Test, described in EPA's alternative attainment test guidance cited above, which requires that the area control strategy result in a reduction of the number of grid cell hours above the ozone standard of at least 80 percent. When the Philadelphia area design values in the base case modeling period are adjusted for the air quality improvement predicted in the attainment year by the local-scale modeling, according to the screening test outlined in the EPA's guidance entitled "Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-Hour Ozone NAAQS," the result is a 2005 projected design value of 126 ppb.

The local-scale modeling results are close enough to attainment to warrant the consideration of WOE arguments that support the demonstration of attainment. With the exception of the additional controls on point sources needed to satisfy the NO<sub>x</sub> SIP call, all other measures modeled in the demonstration of attainment have been adopted and implemented by Delaware and the other States comprising the Philadelphia area.

#### 2. Weight of Evidence (WOE) Analyses

A WOE determination is a diverse set of technical analyses performed to assess the confidence one has in the modeled results and to help assess the adequacy of a proposed strategy when the outcome of local scale modeling is

close to attainment. The attainment demonstration for the Philadelphia area provides WOE arguments that corroborate further that it is likely the Philadelphia area will attain the 1-hour ozone standard by the statutory date of 2005. EPA has developed design value adjustment factors based on regional scale modeling for the supplemental notice of proposed rulemaking of the NO<sub>x</sub> SIP Call (63 FR 25902, May 11, 1998). These adjustment factors were used to adjust the 1996 design values for the Philadelphia area. This analysis showed all adjusted design values below 125 ppb in the Philadelphia area.

Because the Philadelphia area local modeling showed some peak concentrations above levels deemed consistent with attainment, EPA has

conducted an analysis to determine what additional emission reductions may be needed to support ozone attainment in the Philadelphia area. EPA has determined that the Philadelphia area will need additional emission reductions of 0.3% of NO<sub>x</sub> and 4.5% of VOC to ensure attainment of the ozone NAAQS. These reductions are in addition to the NO<sub>x</sub> and VOC emission reductions that will be achieved from the Tier 2 rule. The additional VOC reductions may be achieved through NO<sub>x</sub> substitution in accordance with existing EPA guidance. The DNREC submitted an enforceable commitment to adopt whatever rules are necessary to meet ROP requirements and to attain the 1-hour NAAQS for ozone. This

enforceable commitment was made by Delaware as part of a SIP revision submitted on December 29, 1997.

Based upon the results of the local scale modeling along with the additional WOE arguments presented above, EPA believes the State of Delaware has demonstrated attainment if DNREC submits reaffirmation of its previous enforceable commitment to adopt additional measures as specified in section I.C.5.

*B. Analysis of Submittal Against EPA's Frame Work for Proposing Action on the Attainment Demonstration SIPs*

1. CAA Measures and Measures Relied on in the Modeled Attainment Demonstration SIP

TABLE 4.—CONTROL MEASURES IN THE 1-HOUR OZONE ATTAINMENT DEMONSTRATION FOR THE DELAWARE PORTION OF THE PHILADELPHIA-WILMINGTON-TRENTON OZONE NONATTAINMENT AREA

| Name of control measure or SIP element           | Type of measure           | Included in local modeling  | Approval status   |
|--|---------------------------|-----------------------------|---|
| Enhanced Inspection & Maintenance .....          | CAA SIP Requirement ..... | Yes .....                   | SIP approved.   |
| NO <sub>x</sub> RACT .....                       | CAA SIP Requirement ..... | Yes .....                   | SIP approval pending.   |
| VOC RACT .....                                   | CAA SIP Requirement ..... | Yes .....                   | SIP approved.   |
| Offset Lithography .....                         | State Rule .....          | Yes .....                   | SIP approved.   |
| Industrial Cleaning Solvents .....               | State Rule .....          | Yes .....                   | SIP approved.   |
| Motor Vehicle Refinishing .....                  | State Rule .....          | Yes .....                   | SIP approved.   |
| Stage II Vapor Recovery .....                    | CAA SIP Requirement ..... | Yes .....                   | SIP approved.   |
| On-board Refueling Vapor Recovery .....          | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 86.   |
| Stage I Vapor Recovery .....                     | CAA SIP Requirement ..... | Yes .....                   | SIP approved.   |
| Federal Motor Vehicle Control Program .....      | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 86.   |
| Federal Non-road Gasoline Engines .....          | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 90.   |
| Federal Non-road Heavy Duty Diesel Engines ..... | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 89.   |
| AIM Surface Coatings .....                       | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 59 subpart D.   |
| Consumer & Commercial Products .....             | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 59 subpart C.   |
| Reformulated Gasoline .....                      | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 80 subpart D.   |
| Benzene Waste Rule .....                         | Federal Rule .....        | Yes .....                   | Promulgated at 40 CFR 61 subpart FF.  |
| Sanitary Landfills .....                         | State Rule .....          | Yes .....                   | Approved 111(d) plan. SIP approval pending.   |
| Open Burning .....                               | State Rule .....          | Yes .....                   | SIP approved.   |
| Enhanced Monitoring (PAMS) .....                 | CAA SIP Requirement ..... | Yes .....                   | SIP approved.   |
| National Low Emission Vehicle (NLEV) .....       | State Opt-in .....        | No (OTC LEV was modeled)    | Federal program promulgated at 40 CFR 86 subpart R. State opt-in, SIP approval pending.   |
| OTC NO <sub>x</sub> MOU Phase II .....           | State Initiative .....    | Yes .....                   | SIP approval pending.   |
| Clean Fuel Fleets (CFF) .....                    | CAA SIP Requirement ..... | No (NLEV was modeled) ..... | NLEV was adopted & submitted as a substitute SIP.   |
| Marine Engine Standards .....                    | Federal Rule .....        | No .....                    | Promulgated at 40 CFR 91.   |
| Railroad Engine Standards .....                  | Federal Rule .....        | No .....                    | Promulgated at 40 CFR 92.   |
| Heavy Duty Diesel Engines (On-road) .....        | Federal Rule .....        | No .....                    | Promulgated at 40 CFR 86.   |
| New Source Review .....                          | CAA SIP Requirement ..... | N/A <sup>1</sup> .....      | SIP approval pending.   |
| 15% VOC Reduction Plan .....                     | CAA SIP Requirement ..... | Yes <sup>2</sup> .....      | SIP approved.   |
| Base Year Emissions Inventory .....              | CAA SIP Requirement ..... | N/A .....                   | SIP approved.   |
| Emissions Statements .....                       | CAA SIP Requirement ..... | N/A .....                   | SIP approved.   |
| 9% Rate of Progress Plans .....                  | CAA SIP Requirement ..... | Yes <sup>2</sup> .....      | SIP approval of Post 96 ROP plan (97–99) pending. DE provided an enforceable commitment to adopt all necessary rules for Post 99 ROP Plans demonstrating ROP through 2005 and attainment of the 1-hour ozone NAAQS. |

TABLE 4.—CONTROL MEASURES IN THE 1-HOUR OZONE ATTAINMENT DEMONSTRATION FOR THE DELAWARE PORTION OF THE PHILADELPHIA-WILMINGTON-TRENTON OZONE NONATTAINMENT AREA—Continued

| Name of control measure or SIP element            | Type of measure           | Included in local modeling | Approval status     |
|---|---------------------------|----------------------------|---------------------|
| Fees for Major Sources for Failure to Attain .... | CAA SIP Requirement ..... | No <sup>3</sup> .....      | SIP due 12/31/2000. |

<sup>1</sup> Does not produce emission reductions.

<sup>2</sup> The measures used to demonstrate rate of progress were modeled.

<sup>3</sup> This measure will only take effect if the area fails to attain by 2005 and would only be implemented after 2005.

With the exception of the Post-99 ROP plans for which it has made an enforceable commitment to submit by 12/2000, DNREC has submitted all CAA mandated measures. As indicated in Table 4, above, many but not all of these measures have been approved to date. EPA is proposing approval of Delaware's attainment demonstration for the Philadelphia area, including the enforceable commitment for the Post-99 ROP submission, as meeting the requirements of section 182(c)(2)(A) of the CAA. In today's action on the attainment demonstration, EPA is not proposing approval of Delaware's commitment to submit the required Post-99 ROP plans as having satisfied the requirements of section 182(c)(2)(B) of the CAA. EPA will take separate action on whether Delaware's commitment to submit its Post-99 ROP plans and the plans themselves meet the requirements of section 182(c)(2)(B).

## 2. NO<sub>x</sub> Reductions Affecting Boundary Conditions

A crucial element of the attainment demonstration for the Philadelphia area is the adoption and implementation of NO<sub>x</sub> controls consistent with the modeling demonstration. Delaware modeled NO<sub>x</sub> controls consistent with the NO<sub>x</sub> SIP call, therefore, as discussed in section I.C.1., Delaware must adopt NO<sub>x</sub> SIP call level controls within the modeling domain in order to have an approvable attainment demonstration.

## 3. Motor Vehicle Emissions Budget

EPA has found that the motor vehicle emissions budget in the attainment demonstration submitted by the Delaware portion of the Philadelphia area is inadequate for conformity purposes. On October 26, 1999, Judith M. Katz, Director, Air Protection Division, EPA, Region III, sent a letter to Mr. Darryl Tyler, Environmental Program Administrator, Air Quality Management Section, Delaware Department of Natural Resources and Environmental Control, indicating that the motor vehicle emissions budgets in their demonstration SIP were not adequate for conformity purposes. The motor vehicle emission budgets in the demonstration for the Philadelphia area

were not found adequate because they did not meet all the requirements in 40 CFR Part 93, section 93.118(e). EPA made this determination because the States' plans require additional measures to further reduce emissions to support the attainment test. The following paragraphs provide a summary of each of these findings, of the corrective action required and of EPA's proposed action.

*Additional measures to further reduce emissions to support the attainment test:* The motor vehicle emissions budgets, when considered together with all other emissions sources are not consistent with applicable requirements for attainment as detailed in section 93.118(e)(4)(iv) of the Conformity Rule. The attainment plan identifies motor vehicle emissions budgets for 2005. But the budgets do not meet this requirement because the WOE support for the attainment demonstration will be acceptable only if Delaware provides a reaffirmation by letter that its previously submitted enforceable commitment to adopt additional measures to further reduce emissions includes those necessary to support the attainment test as specified in section I.C.5., above. There will be additional mobile source control measures in effect by 2005 that will assist the area in demonstrating attainment in 2005. The budgets did not incorporate all federally promulgated mobile source control measures. For example, neither the National Low Emission Vehicle (NLEV) nor Heavy-duty Diesel Vehicle (HDV) programs have been incorporated into the budgets.

EPA has interpreted the general adequacy criteria with respect to the 1-hour ozone attainment demonstrations to require the motor vehicle emissions budgets to include the effects of all motor vehicle controls, including federal measures and the mobile source control measures assumed in the NO<sub>x</sub> SIP call, that will be in place in the attainment year.<sup>15</sup> Table 5 lists these measures that will contribute to

attainment in 2005 and that will affect the budget. Therefore, the revised motor vehicle emissions budget presumptively must include all currently promulgated federal measures and state SIP measures shown in Table 5 with the exception of Clean Fuel Fleets (CFF). Delaware has submitted an NLEV SIP revision as a substitute for CFF. For the Delaware component of the motor vehicle emissions budget NLEV must be used as in lieu of CFF.

TABLE 5.—ADDITIONAL MOBILE SOURCE CONTROL MEASURES NEEDED FOR THE 2005 MOTOR VEHICLE EMISSIONS BUDGETS

| Control measures available in 2005                                | Control Measures Contained in the Budgets |
|---|---|
| Federal Motor Vehicle Control Program (FMVCP):<br>Tier 1 .....    | Tier 1 FMVCP only.                        |
| Tier 2.<br>Enhanced I/M w/ clean screen approach (State Adopted). | Enhanced I/M w/ clean screen approach.    |
| Phase II RFG .....  | Phase II RFG.                             |
| National Low Emissions Vehicles (NLEV) (State).                   | Not factored into budget.                 |
| On-board vapor recovery (Federal).                                | On-board vapor recovery.                  |
| Stage II vapor recovery.  | Stage II vapor recovery.                  |
| Heavy Duty Diesel Vehicle (HDV) 2 gm std.                         | Not factored into budget.                 |

*Motor vehicle emissions budget and EPA's proposed action:* EPA is proposing to approve the attainment demonstration SIP if Delaware corrects the deficiencies that cause the motor vehicle emissions budget to be inadequate. In the alternative, EPA is proposing to disapprove the attainment demonstration SIP, if by May 31, 2000, EPA has not made a determination that Delaware has an adequate motor vehicle emissions budget for the Delaware portion of the Philadelphia area. Because many States may shortly be submitting revised demonstrations with revised motor vehicle emission budgets, EPA is providing a 60 day comment

<sup>15</sup> Memorandum, "Guidance on Motor Vehicle Emissions Budgets in One-Hour Ozone Attainment Demonstrations", from Merrylin Zaw-Mon, Office of Mobile Sources, to Air Division Directors, Regions I-VI, issued November 3, 1999.

period on this proposed rule. If Delaware submits a revised attainment demonstration, EPA will place the revisions in the docket for this rulemaking and will post a notice on EPA's website at [www.epa.gov/oms/traq](http://www.epa.gov/oms/traq). By posting notice on the website, EPA will also initiate the adequacy process.

#### 4. Tier 2/Sulfur Program Benefits

As a result of EPA's review of DNREC's SIP submittal, EPA believes that the ozone modeling submitted by the State of Delaware for the Philadelphia area upon which EPA is proposing to approve and to disapprove-in-the-alternative will need the emission reductions from EPA's Tier 2/Sulfur program to attain the 1-hour ozone NAAQS. Further, EPA believes that the Philadelphia area will need additional emission reductions identified by EPA, beyond those from EPA's Tier 2/Sulfur program, to attain the 1-hour ozone NAAQS.

For the Philadelphia area, EPA is proposing to determine that the submitted control strategy does not provide for attainment by the attainment deadline. However, the emission reductions of EPA's Tier 2/Sulfur program, which are not reflected in the submitted SIP, will assist in attainment. Because the Philadelphia area must rely on reductions from the Tier 2/Sulfur program in order to demonstrate attainment, the effects of these standards must be included in the motor vehicle emissions budget.

To assist the States whose counties comprise the Philadelphia area in the preparation of a new submission which could be approved or conditionally approved, EPA has prepared an estimate of the air quality benefits of EPA's Tier 2/Sulfur program. In our calculation, EPA assumed that all of the Tier 2/Sulfur emissions reductions will contribute to the ability of the Philadelphia area to demonstrate attainment. The EPA has further calculated how much additional emission reduction is needed for the Philadelphia area in order for EPA to approve or conditionally approve a revised and re-submitted attainment demonstration for this area. The EPA suggests that the States include these calculations as part of the WOE analysis accompanying the adjusted attainment demonstration and revised motor vehicle emissions budget for this area. Today EPA is proposing to approve a new attainment demonstration if it meets this description.

However, States can use some of EPA's Tier 2/Sulfur program credit for other purposes. Thus, the States could

take credit for all or some of EPA's Tier 2/Sulfur program credit for its attainment demonstration. If the Tier 2/Sulfur program credit the States are assuming for attainment is less than the amount that EPA assumed in calculating the amount of additional emission reductions needed to attain, i.e., the States are applying some or all of the Tier 2/Sulfur program credit for other purposes, the States will have to calculate the new additional emission reductions needed and commit to adopt measures to achieve them. If the States assume all the Tier 2/Sulfur program credit will go toward attainment, then the States will be able to rely on EPA's estimate of the additional emission reductions needed.

*Revisions to the Motor Vehicle Emissions Budget and the Attainment Demonstration When EPA Issues the MOBILE6 Model.* Delaware has previously committed to adopting additional control measures as necessary to attain the one-hour ozone NAAQS as discussed in the preceding section (II.C.3) of this document. EPA believes for the purposes of determining the motor vehicle emissions budget adequate that Delaware already has a commitment to adopt any needed additional measures, but we need reaffirmation from DNREC that the intent of the existing commitment meets all the conditions as stated in section I.C. of this action including revising the mobile vehicle emissions budget when EPA issues the MOBILE6 model. EPA needs to receive this reaffirmation by December 31, 1999 as discussed in section I. above. If Delaware does not reaffirm by December 31, 1999, that its existing commitment to adopt additional measures as necessary to reach attainment is consistent within the framework of this action, then EPA will be unable to determine the area has an adequate conformity budget. The commitment to revise the SIP after MOBILE6 may be submitted at the same time that the state submits the budget that includes the effects of Tier 2 (no later than July 1, 2000).

#### 5. In Certain Areas, Additional Measures to Further Reduce Emissions to Support the Attainment Test

Based on the results of the local scale modeling along with the additional WOE analyses provided in the attainment demonstration for the Philadelphia area, EPA believes that DNREC has successfully demonstrated attainment of the 1-hour ozone standard for the Philadelphia area by the 2005 statutory date if the State submits reaffirmation of its previous enforceable commitment to adopt additional

measures in accordance with the provisions discussed in section I.C.5., above, to support the attainment test. EPA has determined that the Philadelphia area will need additional emission reductions of 0.3% NO<sub>x</sub> and 4.5% of VOC to ensure attainment of the ozone NAAQS. These reductions are in addition to the NO<sub>x</sub> and VOC emission reductions that will be achieved from the Tier 2 rule.

#### 6. Mid-Course Review

In accordance with the provisions of section I.C.6., above, EPA must receive an enforceable commitment or a reaffirmation of a previous enforceable commitment to include a mid-course review from DNREC for the Philadelphia area by the date specified in Table 3 of this document before the attainment demonstration can be approved.

### III. What Are The Consequences of State Failure?

This section explains the CAA consequences of State failure to meet the time frames and terms described generally in this notice. The CAA provides for the imposition of sanctions and the promulgation of a federal implementation plan if States fail to submit a required plan, submit a plan that is determined to be incomplete or if EPA disapproves a plan submitted by the State (We using the phrase "failure to submit" to cover both the situation where a State makes no submission and the situation where the State makes a submission that we find is incomplete in accordance with section 110(k)(1)(B) and 40 CFR part 51, Appendix V.) For purposes of sanctions, there are no sanctions clocks in place based on a failure to submit. Thus, the description of the timing of sanctions, below, is linked to a potential disapproval of the State's submission.

#### A. What Are The CAA's Provisions For Sanctions?

If EPA disapproves a required SIP, such as the attainment demonstration SIPs, section 179(a) provides for the imposition of two sanctions. The first sanction would apply 18 months after EPA disapproves the SIP if the State fails to make the required submittal which EPA proposes to fully or conditionally approve within that time. Under EPA's sanctions regulations, 40 CFR 52.31, the first sanction would be 2:1 offsets for sources subject to the new source review requirements under section 173 of the CAA. If the State has still failed to submit a SIP for which EPA proposes full or conditional approval 6 months after the first

sanction is imposed, the second sanction will apply. The second sanction is a limitation on the receipt of Federal highway funds. EPA also has authority under section 110(m) to a broader area, but is not proposing to take such action today.

*B. What Are The CAA's FIP provisions If A State Fails to Submit A Plan?*

In addition to sanctions, if EPA finds that a State failed to submit the required SIP revision or disapproves the required SIP revision EPA must promulgate a FIP no later than 2 years from the date of the finding if the deficiency has not been corrected. The attainment demonstration SIPs on which EPA is taking action today were originally due in November 1994. However, through a series of policy memoranda, EPA recognized that States had not submitted attainment demonstrations and were constrained to do so until ozone transport had been further analyzed. As provided in the Background, above, EPA provided for States to submit the attainment demonstration SIPs in two phases.

In June 1996, EPA made findings that ten States and the District of Columbia had failed to submit the phase I SIPs for nine nonattainment areas. 61 FR 36292 (July 10, 1996). In addition on May 19, 1997, EPA made a similar finding for Pennsylvania for the Philadelphia area. 62 FR 27201.

In July 1998, several environmental groups filed a notice of citizen suit, alleging that EPA had outstanding sanctions and FIP obligations for the serious and severe nonattainment areas on which EPA is proposing action today. These groups filed a lawsuit in the Federal District Court for the District of Columbia on November 8, 1999.

#### IV. Proposed Action

*A. Proposed Approval*

EPA is proposing to approve Delaware's attainment demonstration SIP revision for the Philadelphia area, including its enforceable commitment to submit adopted ROP plans through the attainment year for the Delaware portion of the Philadelphia area, which was submitted on May 22, 1998 and supplemented on October 8, 1998, if the following actions occur in accordance with the schedules in section I.D, Table 3:

- (1) Delaware adopts and submits an adequate motor vehicle emissions budget.
- (2) Delaware submits a list of control measures that, when implemented, would be expected to provide sufficient additional emission reductions to attain

the standard as discussed in section I.C.5. The State need not commit to adopt any specific measures on their list at this time, but if they do not do so, they must identify sufficient additional emission reductions to attain the standard with the submitted motor vehicle emissions budget. These measures may not involve additional limits on highway construction beyond those that could be imposed under the submitted motor vehicle emissions budget.

(3) Delaware adopts and submits a rule(s) for the regional NO<sub>x</sub> reductions consistent with the modeling demonstration.

(4) Delaware adopts and submits an enforceable commitment, or reaffirmation of existing enforceable commitment to do the following:

(a) Submit measures by 10/31/01 for additional emission reductions as required in the attainment demonstration test as discussed in section I.C.5. For additional emission reduction measures developed through the regional process, the State must also submit an enforceable commitment for the additional measures and a backstop commitment to adopt and submit intrastate measures for the emission reductions in the event the OTR process does not recommend measures that produce emission reductions.

(b) Submit a revised SIP & motor vehicle emissions budget by 10/31/01 if additional measures affect the motor vehicle emissions inventory.

(c) Submit revised SIP & motor vehicle emissions budget 1 year after MOBILE6 issued.

(d) Perform a mid-course review.

*B. Proposed Disapproval-in-the-Alternative*

EPA is also proposing, in the alternative, to disapprove this SIP revision, if any of the actions listed in III.A, above, do not occur in accordance with the schedules in section I.D, Table 3.

EPA is soliciting public comments on the issues discussed in this document or any other relevant issues relating to the attainment demonstration for the Philadelphia area. These comments will be considered before taking final action. Interested parties may participate in the Federal rulemaking procedure by submitting written comments to the EPA Regional Office listed in the ADDRESSES this document. A more detailed description of the state submittal and EPA's evaluation are included in a Technical Support Document (TSD) prepared in support of this rulemaking action. A copy of the TSD is available upon request from the

EPA Regional Office listed in the ADDRESSES section of this document.

#### V. Administrative Requirements

*A. Executive Order (E.O.) 12866*

The Office of Management and Budget (OMB) has exempted this regulatory action from review under E.O. 12866, entitled "Regulatory Planning and Review."

*B. Executive Order 13045*

Executive Order 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that the EPA determines (1) is "economically significant," as defined under Executive Order 12866, and (2) the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to E.O. 13045 because it does not involve decisions intended to mitigate environmental health and safety risks.

*C. Executive Order 13084*

Under E.O. 13084, EPA may not issue a regulation that is not required by statute, that significantly affects or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If the mandate is unfunded, EPA must provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities." Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. This action does not



involve or impose any requirements that affect Indian Tribes. Accordingly, the requirements of section 3(b) of E.O. 13084 do not apply to this rule.

#### *D. Executive Order 13132*

Executive Order 13132, Federalism (64 FR 43255, August 10, 1999), revokes and replaces Executive Orders 12612 (Federalism) and 12875 (Enhancing the Intergovernmental Partnership). Executive Order 13132 requires EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999), because it merely approves a State rule implementing a federal standard, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

#### *E. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on

a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This proposed rule will not have a significant impact on a substantial number of small entities because SIP approvals under section 110 and subchapter I, part D of the Clean Air Act do not create any new requirements but simply approve requirements that the State is already imposing. Therefore, because the Federal SIP approval does not create any new requirements, I certify that this action will not have a significant economic impact on a substantial number of small entities. Moreover, due to the nature of the Federal-State relationship under the Clean Air Act, preparation of a flexibility analysis would constitute Federal inquiry into the economic reasonableness of state action. The Clean Air Act forbids EPA to base its actions concerning SIPs on such grounds. *Union Electric Co. v. U.S. EPA*, 427 U.S. 246, 255–66 (1976); 42 U.S.C. 7410(a)(2).

The EPA’s alternative proposed disapproval of the State request under section 110 and subchapter I, part D of the Act would not affect any existing requirements applicable to small entities. Any pre-existing Federal requirements would remain in place after this disapproval. Federal disapproval of the State submittal does not affect State-enforceability. Moreover EPA’s disapproval of the submittal would not impose any new Federal requirements. Therefore, I certify that the proposed disapproval would not have a significant impact on a substantial number of small entities.

#### *F. Unfunded Mandates*

Under section 202 of the Unfunded Mandates Reform Act of 1995 (“Unfunded Mandates Act”), signed into law on March 22, 1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated annual costs to State, local, or tribal governments in the aggregate; or to private sector, of \$100 million or more. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule. EPA has determined that the proposed approval action does not include a Federal mandate that may result in estimated annual costs of \$100 million or more to

either State, local, or tribal governments in the aggregate, or to the private sector. This Federal action approves pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

Sections 202 and 205 do not apply to the proposed disapproval because the proposed disapproval of the SIP submittal would not, in and of itself, constitute a Federal mandate because it would not impose an enforceable duty on any entity. In addition, the Act does not permit EPA to consider the types of analyses described in section 202 in determining whether a SIP submittal meets the CAA. Finally, section 203 does not apply to the proposed disapproval because it would affect only the State of Delaware, which is not a small government.

#### *G. National Technology Transfer and Advancement Act*

Section 12 of the National Technology Transfer and Advancement Act (NTTAA) of 1995 requires Federal agencies to evaluate existing technical standards when developing new regulations. To comply with NTTAA, the EPA must consider and use “voluntary consensus standards” (VCS) if available and applicable when developing programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical.

Today’s action on Delaware’s One-Hour Ozone Nonattainment Demonstration for the Philadelphia-Wilmington-Trenton Ozone Nonattainment Area, does not require the public to perform activities conducive to the use of VCS.

#### **List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Hydrocarbons, Nitrogen dioxide, Ozone.

**Authority:** 42 U.S.C. 7401, *et seq.*

Dated: November 30, 1999.

**Thomas C. Voltaggio,**

*Acting Regional Administrator, Region III.*

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