

US EPA ARCHIVE DOCUMENT

MEMORANDUM

SUBJECT: Early Planning Guidance for the Revised Ozone and Particulate Matter (PM)
National Ambient Air Quality Standards (NAAQS)

FROM: Sally L. Shaver, Director
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TO: Air Division Director, Regions I - X

On July 16, 1997, the President issued a directive to the Environmental Protection Agency (EPA) on the implementation of the revised air quality standards for ozone and PM. The purpose of this memorandum is to provide guidance on planning for the revised ozone and PM NAAQS consistent with the Clean Air Act and the President's Directive.

This guidance covers two areas: the Governors' submittals due July 1998 addressing designations for ozone and PM and the process for ensuring that the section 110 State implementation plans (SIPs) are adequate for the ozone and PM NAAQS. The EPA also plans to issue additional guidance in mid-to-late 1998. A listing of this additional guidance and other actions can be found in a table on EPA's implementation website (<http://ttnwww.rtpnc.epa.gov/implement/>).

The purpose of this guidance is to set forth EPA's current views on the issues discussed herein. These issues will be addressed in future rulemakings as appropriate (e.g., actions approving or disapproving SIP submittals). In those rulemakings, EPA will propose to take a particular action based in whole or in part on its views of the relevant issues, and the public will have an opportunity to comment on EPA's interpretations during the rulemakings. When EPA issues final rules based on its views, those views will be binding on the States, the public, and EPA as a matter of law.

For PM-related questions on this guidance, please contact Larry Wallace (919/541-0906). For ozone-related questions on this guidance, please contact Annie Nikbaht (919/541-5246). Please ensure that appropriate air agency officials in your States are aware of this guidance.

Attachment

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Early Planning Guidance for the Revised Ozone and Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS)

Preface

The purpose of this guidance is to set forth the Environmental Protection Agency's (EPA's) current views on the issues discussed herein. These issues will be addressed in future rulemakings as appropriate, e.g., actions approving or disapproving State implementation plans (SIP) submittals. In those rulemakings, EPA will propose to take a particular action based in whole or in part on its views of the relevant issues, and the public will have an opportunity to comment on EPA's interpretations during the rulemakings. When EPA issues final rules based on its views, those views will be binding on the States, the public, and EPA as a matter of law.

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1. Introduction

On July 18, 1997, the EPA issued the revised NAAQS for ozone and PM¹. For ozone, the revised NAAQS has an 8-hour averaging period (versus 1 hour for the previous NAAQS), and the concentration has been changed from 0.12 ppm to 0.08 ppm (62 FR 38856). For the PM NAAQS, EPA has added a new 24-hour and an annual NAAQS for PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers). The EPA also revised the form for the pre-existing 24-hour PM₁₀ (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) NAAQS. The EPA did not revise the level of the annual PM₁₀ NAAQS but did revise some aspects of the form of the standard (62 FR 38652).

This guidance covers two Clean Air Act (Act) requirements which States must meet following a NAAQS revision. First, the Governors must submit, by July 1998, recommendations for designations for ozone and PM. These are designations of nonattainment, attainment and unclassifiable. Second, States must assess existing section 110 SIPs to ensure they are adequate for ozone and PM. This guidance outlines a process for States to review these existing SIPs.

2. Governors' Submittal for Designating Areas for Ozone and PM

Section 107(d)(1) of the Act establishes the requirements for making designations for areas when a NAAQS is promulgated or revised. These are designations of nonattainment, attainment and unclassifiable. The provision requires States to make recommendations to EPA concerning the designation of areas in the State within 1 year after promulgation of a new or revised NAAQS (i.e., by July 1998). The EPA is then required to designate areas across the country no later than 2 years following the promulgation of the NAAQS. The EPA may extend the time period for making these designations by up to 1 additional year if the Agency lacks sufficient information to make the designations in the 2-year timeframe. This section describes

¹On July 31, 1997, EPA proposed a rule to address the regional haze program for the protection of visual air quality in national parks and wilderness areas. Areas to be protected under the regional haze program have already been identified by statute; no additional EPA identification is needed. The Act identifies 156 mandatory Class I Federal areas (national parks, wilderness areas, and international parks) for protection under the visibility program. A list of these areas by State can be found in the Code of Federal Regulations (40 CFR 81.401 to 437).

The EPA plans to finalize the regional haze rule later in 1998. Since the rule has not been finalized, this guidance focuses on the ozone and PM NAAQS. However, the regional haze program is mentioned in this guidance in the section 110 portion because such a SIP is also required for regional haze.

how the Governors may meet the requirement to recommend designations by July 1998 for the revised ozone, PM_{2.5} and PM₁₀ NAAQS. When EPA designates areas for the ozone, PM₁₀, and PM_{2.5} NAAQS, the designations will be based on the most recent 3 consecutive years of air quality data from Federal reference or equivalent method monitors.²

a. Ozone NAAQS

The EPA has not yet determined how boundaries should be defined for areas designated under the revised 8-hour ozone NAAQS. The EPA will issue guidance on how to draw boundaries by the end of 1998.³ Nonetheless, the Act still requires Governors to submit recommended designations by July 1998 (1 year from NAAQS promulgation). However, because EPA will not have issued guidance, States may not yet be able to identify the areas represented by the monitors to be used for designation purposes. Therefore, States should review 1995-1997 air quality monitoring information, evaluate the data for completeness, and conduct a preliminary assessment to determine which monitors are recording violations of the revised ozone NAAQS. The States should also assess which monitors are recording attainment of the standard or for which there is insufficient information to determine whether they are recording violations of the standard. States may also submit recommendations on boundaries. The States should submit the results of this process to EPA by July 1998. The Regional Offices will work with the States to assist them in this assessment.

In addition to the July 1998 submittal, throughout 1998, EPA will analyze the effects of regional and local transport on potential nonattainment areas and finalize its regional nitrogen oxides (NOx) rule. During this period, States will also need to assess the effects of transport on

²For the PM NAAQS, it is 3 consecutive years of data in accordance with 40 CFR part 50, Appendices M and N. For the 8-hour ozone NAAQS, it is 3 consecutive years of data in accordance with 40 CFR part 50, Appendix I.

³In the past, for the 1-hour ozone standard, the Metropolitan Statistical Area (MSA) or the Consolidated Metropolitan Statistical Area (CMSA) was the presumptive nonattainment area boundary for serious, severe and extreme areas in order to address sources contributing to violations in the nonattainment area. This requirement is in subpart 2 of the part D nonattainment area requirements. However, implementation of the 8-hour ozone standard is governed by subpart 1 of part D, which does not specify how boundaries should be drawn. Due to the regional nature of ozone, EPA will need to develop guidance on whether boundaries should be larger or smaller than the MSA/CMSA. For example, if an area violating the standard is expected to attain the standard through implementation of regional NOx measures, it may not be reasonable or necessary to include surrounding suburban counties in the nonattainment area if those counties' contribution to nonattainment can be shown to be insignificant in light of the controls to be installed in upwind areas.

individual areas and determine which locations "contribute" to "nearby" monitored violations, as those terms are used in the definition of "nonattainment area" in the Act. Prior to EPA's designation of areas, the Agency will provide the Governors an opportunity to submit supplemental recommendations on designations and boundaries to account for the results of transport analyses conducted in connection with the regional NO_x rule.

b. PM_{2.5} NAAQS

Due to the lack of PM_{2.5} air quality monitoring data, EPA currently plans to make initial designations of unclassifiable for PM_{2.5} areas by July 1999. Redesignations from unclassifiable to attainment or nonattainment will occur between 2002 to 2005, after 3 years of monitoring data become available that are quality assured and that come from air quality monitors which are Federal reference method or equivalent. Therefore, in July 1998, Governors may wish to submit an unclassifiable designation recommendation for all areas in their State. Governors will be given an opportunity, prior to the 2002 to 2005 timeframe and after sufficient data are available, to submit recommendations concerning which areas they believe should be redesignated.

c. PM₁₀ NAAQS

For the purpose of satisfying section 107(d), EPA is requesting that States conduct a preliminary assessment, in order to make recommendations by July 1998, concerning which monitors located in their respective States are believed to be violating the revised PM₁₀ standard. The States should use the best available information to assess which monitors have the potential to attain the standard or those for which there is insufficient information to determine whether they violate or attain the standard. States could also use the best available information to submit recommendations on boundaries.

3. Section 110 SIP

The purpose of this section is to describe the process that will occur to ensure that the States' SIPs are adequate with respect to certain infrastructure and general authority-related elements required under section 110(a)(2) for the revised ozone, PM_{2.5}, and PM₁₀ NAAQS. As explained further below, section 110(a) also includes other elements which are dependent on area designations (e.g., local control measures). These section 110(a) elements will be addressed when States develop SIPs for nonattainment areas and, thus, do not need to be addressed as part of the section 110 adequacy review discussed in this guidance. Attachment A contains a brief description of the section 110(a) elements.

a. Process for Determining Adequacy of Section 110 SIPs for the Revised Ozone and PM NAAQS

Subsections 110(a)(1) and (2) require States to submit SIPs that implement, maintain, and enforce a new or revised standard meeting section 110(a)(2) within 3 years of promulgation of such standard, or such shorter period as EPA may prescribe.⁴ Subsection 110(a)(2) lists the elements such SIPs must include (see Attachment A). For the newly-revised ozone and PM standards, that language means that States are required to submit such SIPs by July 2000, or by such shorter period as EPA may prescribe. Additionally, in previous guidance, EPA has indicated that the pre-existing PM₁₀ NAAQS will remain in place until States with areas that are attaining that NAAQS have, among other things, submitted and EPA has approved a section 110 SIP that addresses the revised PM NAAQS (see discussion below under section 3.b.).⁵

Except as noted below, EPA believes that the currently-approved section 110 SIPs may be adequate because many of the required section 110(a) SIP elements are general information and authorities that constitute the “infrastructure” of the air quality management program, much of which has been in place since the initial SIPs were submitted in response to the Act of 1970. Such elements include adequate resources to carry out the air quality program and a program to enforce control measures (see Attachment A). Many of these infrastructure-related provisions in section 110(a) require States to verify to EPA that they have general authority that is needed to implement any SIP for any NAAQS. Moreover, since States have been regulating ozone and PM₁₀ for a long time, EPA believes that the information contained in existing SIPs generally should be sufficient to address the revised ozone and PM₁₀ NAAQS. As described below, the States, however, should review and revise, as appropriate, the ozone and PM SIPs to ensure they are adequate. In particular, given that EPA has issued new PM standards for fine particles (PM_{2.5}), it is conceivable that some States may need to adopt language specific to the PM_{2.5} NAAQS formally to ensure it has adequate authority to implement the PM_{2.5} NAAQS under section 110(a).

In addition, section 110 also requires SIPs to contain control requirements necessary to attain and maintain the NAAQS. For these elements, EPA believes that the section 110 SIPs may not be adequate. However, as provided in Attachment B, EPA believes that this requirement is more explicitly addressed in part D. Therefore, EPA does not expect States to address these elements in the section 110 SIP revision due by July 2000. Instead, these elements will need to be addressed when States develop and submit SIPs consistent with part D for nonattainment areas which will have to include control strategies to address NAAQS violations.

⁴The section 110(a) SIP is distinct from the part D nonattainment area SIP States must submit no later than 3 years following “nonattainment” designation pursuant to the Act. For a further discussion of how the section 110 requirements relate to the nonattainment area requirements in part D, see Attachment B.

⁵See memorandum “Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM₁₀ NAAQS,” from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, to the Regional Administrators, December 29, 1997.

To ensure that section 110 “infrastructure” related elements are adequate in light of the new or revised NAAQS and in light of statutory revisions to section 110 made since 1970, EPA is issuing this guidance for the regional offices in working with the States to identify and remedy any inadequacies in the SIPs. Soon, EPA will be notifying the States, by letter from the EPA Regional Administrators, that the States need to review their SIPs for the ozone, PM₁₀, and PM_{2.5} NAAQS to determine if they adequately address the infrastructure-related elements in section 110(a)(2). The EPA will request in the letter that the States, in turn, notify EPA by letter to certify whether their current SIP is adequate with respect to these section 110 elements. The certification of adequacy should be made by the Governor or his/her designee. If a State’s section 110 SIP is not adequate for purposes of the revised ozone or PM standards, as required in the Act, the State must revise the SIP and submit it to EPA within 3 years of NAAQS promulgation (by July 2000).⁶

b. Process for Determining Adequacy of Section 110 SIPs that is Specific to Revocation of the Pre-existing PM₁₀ NAAQS

As discussed in EPA guidance on revocation of the pre-existing PM₁₀ NAAQS, there are two conditions for having the pre-existing PM₁₀ NAAQS revoked for areas attaining the PM₁₀ NAAQS, based on air quality data from 1994-96.

1) Control Measure SIP

First, the areas must have received or receive EPA approval of a SIP that includes all control measures which have been adopted and implemented at the State level to meet the pre-existing PM₁₀ NAAQS.

2) Section 110 Requirements Necessary for PM-10 NAAQS Revocation

Second, these areas must receive EPA approval of three specific requirements of the section 110 SIP that address the revised PM NAAQS. The EPA believes that many of the existing section 110 SIPs for currently-attaining PM₁₀ areas may be adequate to meet many of the new section 110 SIP elements for the PM NAAQS. However, States have to address the three fundamental requirements spelled out below that will be key to a State’s ability to demonstrate that its section 110 SIP is adequate to implement the revised PM₁₀ and PM_{2.5}

⁶As noted at the beginning of this section, the Act provides EPA the authority to set an earlier due date than 3 years for submission of the section 110 SIP. Except as noted with respect to the 3 specified actions, EPA is not setting a date prior to July 2000 for States to certify the adequacy of their section 110 SIPs and to make any necessary revisions.

standards. The EPA believes that an adequate section 110 SIP must enable the State to develop a PM infrastructure by identifying and/or establishing: (a) the authority and adequate resources to develop an accurate, complete, and comprehensive emissions inventory; (b) the authority and adequate resources to develop, deploy, and operate the PM monitoring network; and (c) the authority and adequate resources to perform modeling. The EPA will evaluate and approve those section 110 SIPs that adequately demonstrate that these key requirements have been satisfied.

c. Section 110 Provisions Requiring Specific SIP Revisions

There are three section 110 elements that EPA believes are not sufficiently addressed in existing section 110 SIPs for some States and will require specific SIP revisions.

1) Ozone Transport Rulemaking

First, EPA proposed to require certain States to submit a SIP to reduce ozone transport for attainment of the 1-hour and 8-hour ozone standards. On November 7, 1997, EPA proposed a rule to require 22 States and the District of Columbia to submit SIPs that address the regional transport of ground-level ozone in the East (62 FR 60318). The rule proposes to require these States to reduce emissions of NO_x by certain amounts. The EPA proposed to issue one and the same rule to address ozone transport for both the 1-hour and 8-hour ozone standards. For the 8-hour standard, States will need to reduce the NO_x emissions pursuant to the section 110 SIP due for purposes of the revised NAAQS. Whereas the general policy above indicates that States have 3 years from NAAQS promulgation, July 2000, to address any deficiencies in their section 110 SIPs, EPA's proposed ozone transport rule requires States to submit the SIP revisions under the 8-hour ozone NAAQS by September 1999 to meet the requirements of section 110(a)(2)(D). This is consistent with the authority in section 110(a)(1) for EPA to establish a period shorter than 3 years for submittal. The EPA plans to supplement its proposal in the spring of 1998 and to finalize the action in September 1998. The SIPs to meet the requirements of section 110(a)(2)(D) will be due for areas covered by that rule on the date established in the final rule.

2) Prevention of Air Pollution Emergency Episodes

Second, EPA will be revising its rule on prevention of air pollution emergency episodes to reflect the revised 8-hour ozone NAAQS.⁷ Section 110(a)(2)(G) includes a requirement that States provide authority to implement the emergency episode provisions in their SIPs. In general, State SIPs contain the requisite authority, and this authority is not based on the form of the pollutant or on a specific standard. The EPA anticipates, though, that for many States their section 110 SIPs will be adequate without additional revision. However, EPA anticipates that

⁷See 40 CFR part 51.150 through 51.153, subpart H - Prevention of Emergency Episodes.

when it changes its rule, some States may need to revise the emergency episode provision in their section 110 SIPs.

3) Regional Haze Section 110 SIP

Third, States may need to provide additional SIP authorities to implement the regional haze program pursuant to section 110(a)(2)(J) of the Act. As mentioned above, section 110 SIPs for regional haze are required by the Act within 12 months of promulgation of the final rule, which EPA expects to occur later in 1998. The EPA anticipates that the regional haze section 110 SIP requirements will focus on establishing the basic infrastructure of the program and gathering critical technical background information. Under this approach, more complex issues related to control strategy development and enforcement would be addressed in the regional haze control strategy SIP. The timing for submission of this SIP will be addressed in the final regional haze rule. The EPA anticipates that the submittal of this SIP would be timed to coincide with the submittal of the PM_{2.5} control measure SIPs.

Attachment A: Required Section 110 SIP Elements

The SIP elements listed below are required under section 110(a)(2). Two requirements are not specifically listed because, as EPA interprets the Act, SIPs incorporating any necessary local nonattainment area controls would not be due until as late as July 2003. Those requirements are:

- Emission limits and other control measures (section 110(a)(2)(A)), and
- Provisions for meeting part D, section 110(a)(2)(I), which requires areas designated as nonattainment to meet the applicable nonattainment planning requirements of part D, title I of the Act.

Attachment B contains a further discussion of how States should address these two provisions and how the section 110 requirements relate to the nonattainment area requirements in part D.

Ambient air quality monitoring/data system: Section 110(a)(2)(B) requires SIPs to provide for setting up and operating ambient air quality monitors, collecting and analyzing data and making these data available to EPA upon request.

Program for enforcement of control measures: Section 110(a)(2)(C) requires States to include a program providing for enforcement of measures and regulation of new/modified (permitted) sources.

Interstate transport: Section 110(a)(2)(D) requires States' SIPs to include provisions prohibiting any source or other type of emissions activity in one State from contributing significantly to nonattainment in another State or from interfering with measures required to prevent significant deterioration of air quality or to protect visibility.

Adequate resources: Section 110(a)(2)(E) requires States to provide for adequate funding, personnel and legal authority for implementation of their SIPs.

Stationary source monitoring system: Section 110(a)(2)(F) requires States to establish a system to monitor emissions from stationary sources and to submit periodic emissions reports.

Emergency power: Section 110(a)(2)(G) requires States to provide for authority to implement the emergency episode provisions in their SIPs.

Provisions for SIP revision due to NAAQS changes or findings of inadequacies: Section 110(a)(2)(H) requires States to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to a call that the SIP is inadequate.

Section 121 consultation: Section 110(a)(2)(J) requires States to meet applicable requirements of section 121 relating to consultation.

Section 127 public notification: Section 110(a)(2)(J) requires States to meet applicable requirements of section 127 relating to public notification.

PSD and visibility protection: Section 110(a)(2)(J) also requires States to meet applicable requirements of part C related to prevention of significant deterioration and visibility protection.

Air quality modeling/data: Section 110(a)(2)(K) requires that SIPs provide for performing air quality modeling for predicting effects on air quality of emissions from any NAAQS pollutant and submission of data to EPA upon request.

Permitting fees: Section 110(a)(2)(L) requires each major stationary source to pay permitting fees to cover the cost of reviewing, approving, implementing and enforcing a permit.

Consultation/participation by affected local entities: Section 110(a)(2)(M) requires States to provide for consultation and participation by local political subdivisions affected by the SIP.

Attachment B: How Section 110 Relates to Part D Nonattainment Area Requirements

Section 110(a)(1) states that the SIPs required by that subsection are to be submitted to EPA “within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 109.” Such SIPs are to provide for “implementation, maintenance and enforcement” of the new NAAQS. Section 110(a)(1), however, must be read in light of the timetable for designations of areas as nonattainment, attainment, or unclassifiable under section 107(d)(1) and the explicit timetables for SIP submissions for nonattainment areas under part D of title I. Section 107(d)(1) provides that designations must occur within 3 years of the promulgation of a new NAAQS, and the part D provisions provide for the submission of SIPs meeting the nonattainment area requirements within a specified time period following the designation of an area as nonattainment.

The EPA believes that, in the context of the revised ozone and PM NAAQS, the SIP requirements in section 110 and those in part D for nonattainment areas can best be harmonized by interpreting the section 110(a)(1) deadline as being satisfied by the submission of SIP elements whose content does not depend on the designation of an area. Therefore, States should review their existing 110 SIPs to ensure that they provide adequate authority for the more general planning requirements such as monitoring, modeling and inventories. In addition, some States will need to submit a NO_x control SIP for ozone under section 110(a)(2)(D). The EPA has proposed to call for the NO_x control SIPs in 22 States and the District of Columbia and has proposed a submission date of September 1999. Since the NO_x control strategy is regional in nature and is not dependent on the designation of any particular area (but rather is based on reducing emissions that are contributing to violations at downwind monitors), these States will need to submit a SIP pursuant to section 110(a)(2)(D) in the timeframe established in a final rule calling on States to reduce NO_x emissions.

With respect to developing local control requirements and for areas not subject to a SIP call to achieve regional reductions under section 110(a)(2)(D), EPA believes that, until areas are designated, it is reasonable to view the existing substantive SIP provisions as adequate; it would be premature to require areas to adopt additional control requirements or emissions limitations prior to the designation of areas and the dates for when nonattainment SIPs are due for those areas. Consequently, the requirements for emissions limits and other control measures and provisions meeting part D are not specifically listed in Attachment A and would not be due by July 2000 as part of the section 110 SIP revision. As EPA interprets the Act, SIPs incorporating any necessary local-area controls that are necessary as a result of an area being designated nonattainment would not be due until the nonattainment SIP is due. Specifically, for ozone and PM_{2.5} nonattainment areas, section 172 requires States to submit local control measure SIPs meeting section 110(a)(2) no later than 3 years from designation. For ozone, the SIPs would be due no later than the July 2002 - July 2003 timeframe, depending on when ozone areas are designated, unless the area wants to receive the transitional classification. In that case, the SIP

should be submitted by 2000, with the exception of a transitional area's nonattainment new source review program which States should submit no later than 3 years after the area is designated nonattainment. For $PM_{2.5}$, the SIP would be due in the 2005 -2008 timeframe; by 3 years after EPA expects to redesignate areas from unclassifiable to nonattainment for $PM_{2.5}$. For PM_{10} , section 189 requires States to submit SIPs 18 months from designation; nonattainment SIPs, therefore, would be due no later than the January 2001 - January 2002 timeframe.