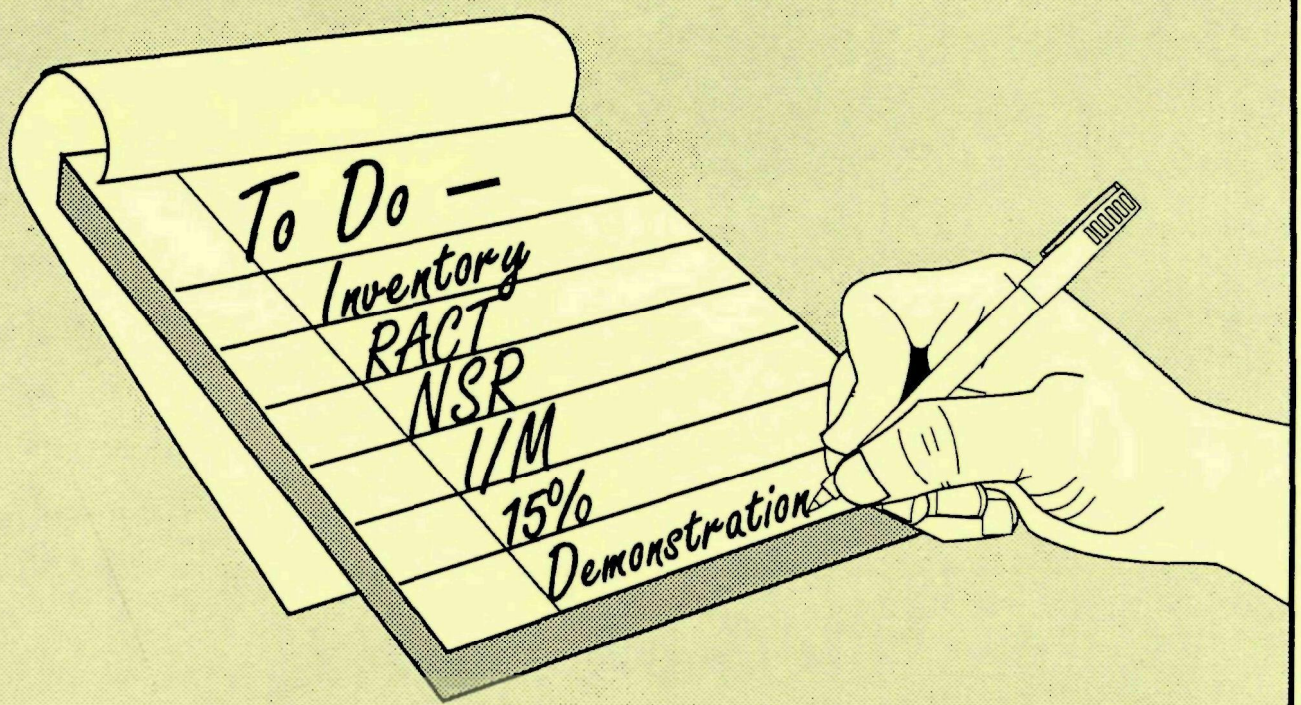
Getting Started on Title I:

A Summary of the Provisions in the Clean Air Act Amendments of 1990 for Ozone and Carbon Monoxide Nonattainment Areas



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Part 1: Introduction

The complexity and sheer volume of the Title I provisions in the Clean Air Act Amendments of 1990 (CAAA) suggest that special efforts are warranted to ensure that those involved in developing and implementing the requirements have a clear understanding of the actions and submittals that will be needed. For this reason, the Environmental Protection Agency (EPA) has developed this document to assist States as they *schedule* and *prioritize* their work activities over the next several months and years to prepare their ozone and carbon monoxide (CO) State implementation plans (SIP's), as required in Title I.

This document outlines the requirements for States which must develop ozone and/or CO SIP's pursuant to the new provisions in Title I of the CAAA. The document focuses on those actions the State must take in the early stages (in particular, within the first four years after enactment) regarding the designation and classification of their nonattainment areas, development and adoption of required control measures, and technical analyses of their pollution problems and control strategies. The document is *not* intended to provide detailed technical guidance or to specify Environmental Protection Agency (EPA) policy, but rather it is designed to provide a clear, concise statement of the new CAAA requirements. The EPA will publish a "General Preamble" in the Federal Register to provide specific criteria and policies it will use to determine the approvability of the various SIP submittals.

The requirements for States in this document are generally discussed in a chronological order related to when specific submittals are due. In this way, the document is intended to help States assess their work loads in the months and years to come and to set schedules and priorities for satisfying the many new requirements under Title I for ozone and CO nonattainment areas.

To support State efforts to accomplish the required submittals, a listing of technical guidance is provided in the Appendix. This listing includes both the currently available guidance and future guidance (along with a schedule for its completion). For quick reference, many of the guidance materials are also listed within the document near the discussion of their respective subjects. Also included in the document is a discussion of certain "transitional issues" and a description of the actions EPA will be taking to

develop new control measures or additional guidance on control measures.

The focus of this document is on the basic submittals that will be required of States. As a result, certain topics are not discussed here but will be addressed in subsequent guidance (e.g., the General Preamble). For example, submittals related to failures to meet applicable milestones (i.e., actions such as "bump ups" from one classification to a higher classification) or redesignation procedures and requirements are not discussed in this document. Also, the general SIP requirements of section 110(a)(2) are not addressed, but States should consider these requirements as they prepare their submittals for nonattainment areas. Subsequent guidance will address important new provisions under section 110.

In addition to distributing this document, the EPA will be conducting national workshops on selected implementation topics and periodically preparing "Q's & A's" to provide States timely assistance in responding to the new requirements.

Part 2: State Submittal Requirements

The discussion of the submittal requirements is organized chronologically--that is, by the deadlines for the submittals. All of the submittals are listed in Figure 1 for quick reference. As stated above, the discussion of a submittal requirement in this report often includes a list of selected guidance materials that are (or will be) available to assist the States.

It is important to keep in mind in reviewing the submittal requirements is that, in most cases, they are "additive" from one classification to another. In other words, the statement that a certain control measure is required for Moderate ozone areas should be read as applying to Serious, Severe, and Extreme ozone areas as well, unless otherwise noted.

Actions Due by March 15, 1991 (120 days after enactment)

Designations and Classifications

Areas formally designated as nonattainment before enactment were again designated as nonattainment by operation of law on the date of enactment (November 15, 1990). These areas were also

Figure 1: Required State Submittals and Actions

	Ozone Classification					CO Classification	
Submittal/Action	***Marginal***	***Moderate***	***Serious***	***Severe***	***Extreme***	***Moderate***	***Serious***
By March 15, 1991 (120 days after enactment)[1]							
A request for more time to study boundaries for serious+ area that was designated and classified as of enactment (due 45 days after classification)			X	X	X		X
List of all areas with proposed designations and boundaries (except boundaries for serious+ areas with requests for more time to study)	X	X	X	X	X	X	X
A request for more time to study boundaries for serious+ area that was designated and classified at 240 days after enactment (requested to be in March 15, 1991, submittal; latest date for request is August 27, 1991)			X	X	X		X
Commitment to submit SIP revision to correct I/M program (i.e., implement previously-required program) ("immediate submittal" of revision for I/M)	X					X	
Commitment to submit SIP revision to implement basic I/M program ("immediate submittal" of revision for I/M) (plus serious areas where urbanized population < 200,000)		X					
By May 15, 1991 (6 months after enactment)							
Submit RACT Corrections	X	X	X	X	X		
Northeast ozone transport commission convenes (applies to Northeast transport region)							

[1]Certain submittals/actions may actually be required before the end of the time period specified. Check the narrative portion of the document for specific submittal time schedules.

Submittal/Action	Ozone Classification					CO Classification	
	Marginal	*Moderate*	*Serious*	*Severe*	*Extreme*	*Moderate*	*Serious*
By November 15, 1991 (12 months after enactment)							
Implement basic I/M programs	X	X					
By May 15, 1992 (18 months after enactment)							
Commence actions to adopt and implement enhanced monitoring program requirements			X	X	X		
By November 15, 1992 (24 months after enactment)							
Submit comprehensive emission inventory	X	X	X	X	X	X	X
Submit requirements for emission statements	X	X	X	X	X		
Submit VOC RACT rules (existing CTG's; non-CTG major sources)		X	X	X	X		
Submit NO_x RACT rules (unless demonstrate not appropriate)		X	X	X	X		
Submit NSR rules (VOC and NO_x)	X	X	X	X	X		
Submit Stage II vapor recovery program		X	X	X	X		
Submit Enhanced I/M program; begin implementation			X	X	X		
Submit requirements for transport region (VOC, NO_x RACT and NSR; Enhanced I/M) (applies across transport region)							
Submit conformity requirements	X	X	X	X	X	X	X
Submit measure for reducing VMT				X	X		X
Submit CO attainment demonstration						X[2]	X
Submit contingency measures (if VMT forecasts exceeded)						X[2]	X
Submit transportation control measures (TCM's)				X	X		X

[2]Applies to areas with design values > 12.7 ppm

Submittal/Action	Ozone Classification					CO Classification	
	Marginal	*Moderate*	*Serious*	*Severe*	*Extreme*	*Moderate*	*Serious*
Submit revision requiring employer trip reduction programs (25% vehicle occupancy rate reductions)				X	X		
Submit oxygenated fuel program						X	X
By November 15, 1993 (36 months after enactment)							
Submit "15% SIP" (i.e., measures showing 15% reduction in VOC baseline)		X	X	X	X		
Submit demonstration re: additional VOC, NO_x reductions as necessary to attain		X					
Submit NSR program (CO)						X	X
By November 15, 1994 (4 years after enactment)							
Submit attainment demonstration (photochemical dispersion modeling)			X	X	X		
Submit RFP demonstration showing 3% average annual reductions commencing 6 years after enactment			X	X	X		
Submit contingency measures for failures to meet milestones			X	X	X		
Submit clean-fuel vehicle program			X[3]	X	X		
Submit Stage II program (or "reflect comparable measures") in transport region							
Submit plans to incorporate EPA's emission diagnostic rules (estimated time)	X	X	X	X	X		

[3]As applicable in regards to Title II requirements

classified at that time on the basis of 1987-89 data, in the case of ozone, and 1988-89 data, in the case of CO[1]. Classification of an area is based on the area's design value. The method used to calculate the design value is described in a June 18, 1990 memorandum from William Laxton to the Regional Division Directors (see below).

In general, the 1990 CAAA require each State to submit to EPA by March 15, 1991, (120 days after enactment) a list of all areas in the State, indicating designations for ozone or CO (or affirming existing designations) and describing their boundaries. A State cannot reduce any existing (pre-enactment) boundaries of ozone or CO nonattainment areas through this process. EPA intends to act on the list by promulgating new or affirmed designations, classifications, and boundaries by no later than July 13, 1991 (120 days after receipt of the State list is required). If EPA chooses to modify the State list (for example, by modifying the boundaries), EPA must notify the State by no later than May 14, 1991 (60 days prior to EPA promulgation).

The March 15, 1991, submittal must list all nonattainment areas, including the recommended boundaries of these areas. In determining boundaries, the State should consider a wide range of factors, including population, population density, growth projections, and commuting patterns. The default areas for boundaries for ozone and CO nonattainment areas should be the consolidated metropolitan statistical area (CMSA), or the metropolitan statistical area (MSA), whichever (if any) is applicable.

The CAAA provide that by operation of law, any ozone or CO nonattainment area classified on the date of enactment as serious or higher (under the process described below) takes as its boundary either the CMSA or MSA, as of December 30, 1990 (45 days from their classification), unless the Governor has notified EPA by that date that the State wishes to consider further the boundaries of the area. For areas for which the Governor has submitted such a notification, the State must expeditiously submit to EPA any recommendations and studies concerning the boundaries. The boundaries will become the CMSA [MSA] by January 15, 1992 (14 months after enactment) unless, by that date, the State recommends and EPA concludes that a smaller boundary is appropriate. In the interest of administrative expediency, EPA has urged States to submit any recommendations and studies concerning boundaries as soon as possible and preferably by March 15, 1991. EPA would

prefer that final boundaries for as many areas as possible be determined with the national Federal Register action occurring 240 days from enactment.

Additional designations, classifications, and boundary-setting will occur with the March 15 submittal of a list designating all areas in the State, and EPA promulgation of that list (with appropriate modifications) by July 13, 1991, (no later than 240 days from enactment). This 240-day process is expected to result in the addition of new nonattainment designations for some areas not previously designated nonattainment, and the expansion of the boundaries of some areas that were designated nonattainment as of the date of enactment[2].

The CAAA contain special provisions for two categories of areas that do not fit within the basic classification scheme-- transitional areas and rural transport areas. Transitional areas are areas that were designated nonattainment for ozone before the enactment of the CAAA but are not now recording violations of the standard[3]. Section 185A of the CAAA directs the Administrator to suspend the ozone-specific requirements for these areas until air quality data through 1991 can be collected and reviewed. By June 30, 1992, the Administrator must determine whether the area is still not violating the ozone standard. If no violations have occurred, the State must submit a maintenance plan (as part of the requirements for redesignation) within 12 months of that determination. If violations occur, the area becomes subject to the new requirements according to its classification (based on its design value).

In the other case, the Administrator may treat an area as a "rural transport area" if he determines that emissions from the area do not contribute significantly to the ozone concentrations in that area or in other areas. Rural transport areas are subject to the same requirements that apply to marginal areas. To qualify as a rural transport area, an area must not border or be within an MSA or CMSA; ambient air quality monitoring must show violations of the ozone standard and the area is or will be designated as an ozone nonattainment area under the new designation process; and, finally, precursor emissions from point, area, and mobile sources in the area must not make a significant contribution to the ozone concentrations measured in the area or in other areas.

A State wishing to qualify an area as a rural transport area must also reasonably implicate an upwind area. The State must submit

appropriate documentation to this effect to EPA in advance of the required State implementation plan (SIP) revision for the area. The EPA will review the data and inform the State of the Administrator's decision. Application on the part of a State as a rural transport area will not relieve the state from complying with SIP submittal deadlines in the event the Administrator ultimately does not treat the area as qualifying.

The March 15, 1991, submittal by the State is not required to specify areas as transitional areas or rural transport areas. The EPA is requesting, however, that States identify any such areas as early as possible so that EPA can include these areas in the promulgation due by July 12, 1991, (240 days after enactment).

Guidance:

- Memorandum issued on November 14, 1990, by John Seitz, Director, EPA's Office of Air Quality Planning and Standards, describing the designation and classification process
- December 13, 1990, letter from EPA Assistant Administrator William G. Rosenberg to State Governors concerning early actions regarding designations, classifications, and boundaries
- EPA Regional Administrator letters to States (January 1991) on the designation and classification steps, initial listing of State areas, and other important "early" actions
- Emissions Inventory/Modeling Sub-Work Group in-house document titled, Requirements for Nonself-Generating or Rural Transport Areas, September 18, 1990; and Consideration Of Transported Ozone And Precursors And Their Use In EKMA, EPA-450/4-89-010.)

Motor Vehicle Inspection and Maintenance (I/M) Programs

I/M Fix-ups: In both marginal ozone nonattainment areas and moderate CO nonattainment areas, any plan that already contains, or was required by the 1977 Act to have contained, a basic I/M program, must contain such a program meeting either all of EPA's previous guidance on basic I/M programs or retaining the program now in the plan, if more stringent than otherwise required. This requirement is contained in section 182(a)(2)(B) for ozone areas and in section 187(a)(4) for CO areas. The statute requires these corrected plans "immediately" after enactment, since such plans were required under prior law. EPA acknowledges that some areas may have to enact further legislation to upgrade existing programs, making this immediate deadline virtually impossible to meet. Such

states should at a minimum immediately submit a schedule outlining the necessary legislative steps and committing to meet the most expeditious timeline possible for implementing them.

I/M for Moderate Ozone Areas: The CAAA require the plan for all moderate ozone nonattainment areas to include a basic I/M program whether or not such program was required under the 1977 Act. This requirement is contained in section 182(b)(4). The statute again requires these plans "immediately" after enactment, although in a few cases such areas may be subject to this requirement for the first time. Since (1) normally EPA would provide at least one year for an area newly subject to such requirements to adopt and implement an I/M program and (2) EPA will be revising its I/M guidance [pursuant to section 182(a)(2)(B)(ii)][4], EPA will use its authority under new section 110(k)(4) to conditionally approve basic I/M programs in moderate ozone areas newly subject to the requirement based upon the State's commitment to develop such programs within one year from EPA's (conditional) approval of the plan. States containing these areas should promptly submit schedules outlining the steps necessary to develop and implement these programs, and make enforceable commitments to adopt the programs within one year. Generally, such programs should be effective within one year of State adoption.

Where the boundary of a nonattainment area changes anytime after enactment pursuant to the designation provisions of the amended Act, EPA will again conditionally approve SIP revisions based upon enforceable commitments, submitted promptly after the designation, to adopt I/M programs within one year in any areas newly subject to I/M requirements by virtue of the boundary change. As discussed later in this document, areas classified at least serious for ozone or CO will be required to adopt an "enhanced" I/M program within two years of enactment. Thus, in some cases, areas may become newly subject to both basic and enhanced I/M requirements, with the basic I/M requirements due shortly prior to the deadline for submission of the SIP revision providing for the enhanced I/M program. In such cases, timely submission of an enhanced I/M program will make development of a basic I/M program unnecessary and EPA will not require the submission of the basic I/M requirements discussed above.

Guidance:

- Guidance on inspection and maintenance (I/M) programs to be available by August 1991

Actions due by May 15, 1991 (6 months after enactment)

RACT Fix-ups

Under section 182(a)(2) of the new amendments, States with existing areas designated nonattainment for ozone are required within six months of their classification under section 181(a) to submit revisions to the SIP that correct or add requirements concerning reasonably available control technology (RACT) that were required under section 172(b) of the Clean Air Act before the 1990 Amendments. Since (by operation of law) areas designated nonattainment under the prior law were both designated nonattainment and classified on the date of enactment (see "Designation and Classifications" above), these RACT corrections are due from these areas within six months from the date of enactment (i.e., by May 15, 1991).

EPA has already notified states with existing nonattainment areas of the need to correct discrepancies between their SIP's and the applicable requirements of the law before the Amendments. Guidance concerning the RACT requirements has also been issued by EPA through control technique guidelines (CTG's) and other guidance, notice of which has been published in the Federal Register. The SIP revisions submitted by the States are expected to comply with the EPA guidance. Areas are expected to adopt RACT for various types of sources as explained in EPA's established RACT interpretations, which are summarized in 52 FR 45044, 45068 (November 24, 1987) and in the RACT guidance referenced in EPA's 1988 and 1990 SIP calls for ozone nonattainment. The EPA guidance is also listed in Appendix A to this memorandum.

Guidance:

- Notifications of SIP discrepancies -- 55 FR 30973 (July 30, 1990) and 53 FR 34500 (September 7, 1988)

- RACT correction guidance -- 52 FR 45044, 45068 (November 24, 1987)

Northeast Ozone Transport Commission

The CAAA provide for the establishment of a transport commission to "assess the degree of interstate transport of the pollutant or precursors to the pollutant throughout any transport region, assess strategies for mitigating the interstate pollution, and recommend to the Administrator such measures as the Commission determines to be necessary to ensure that the plans for the relevant States meet the requirements of Section 110(a)(2)(D)." [section 176A] In addition, section 184 of the CAAA specifically establishes a transport region comprising the following: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the consolidated metropolitan statistical area (CMSA) containing the District of Columbia. The commission[5] for this region must be convened by the Administrator by May 15, 1991 (6 months after enactment).

There are no specific transport-related SIP submittals that are required during this time period from the States in the transport region. (Within 2 years, as discussed below, several important submittals are required.) The primary action required of these States by May 15, 1991, is that they specify their representatives to the commission and participate in the commission meeting. The EPA is contacting the affected States directly to determine meeting dates and locations, other logistical arrangements, and important issues needing to be addressed.

Guidance:

- Correspondence from William K. Reilly, EPA Administrator, to Governors of States located in the ozone transport region created under section 184(a), March 28, 1991.

Actions Due by May 15, 1992 (18 months after enactment)

Enhanced Monitoring

All SIP's for serious and above ozone nonattainment areas must contain a program of measures designed to enhance and improve both ambient air quality monitoring and emissions monitoring. The enhanced program for ambient air quality monitoring should contain measures for ozone, nitrogen oxides, and volatile organic compound pollutants. States are required to take immediate action to adopt and implement an enhanced monitoring program following EPA's promulgation of rules regarding such programs. The EPA is required to promulgate these rules by May 15, 1992 (18 months after enactment). This requirement is contained in section 182 (c)(1).

Upon promulgation of these rules, EPA will provide further guidance as to the required actions and schedule for States.

Guidance:

- Enhanced ambient air quality monitoring program for serious, severe, & extreme ozone areas (May 92)

Actions Due by November 15, 1992 (24 months after enactment)

Emission Inventories

Section 182(a)(1) requires all ozone nonattainment areas to submit a comprehensive, accurate, current inventory of actual emissions from all sources within 2 years of enactment. Section 187(a)(1) has the same requirement for CO nonattainment areas. This inventory is defined as the baseyear inventory and is for the calendar year 1990.

For ozone, the baseyear inventory includes both anthropogenic and biogenic sources of VOC and NO_x. The inventory (excluding the biogenic portion) is the basis for meeting the milestone requirement of 15 percent reduction over the first six years (discussed below under submittals due within 36 months). This inventory also serves as the basis for the 3 percent per year reductions necessary for serious and above areas to achieve after the first six years until the area reaches attainment (discussed below under submittals due within 48 months).

In order to do the appropriate calculations to determine the required reductions described above, the baseyear inventory must be adjusted for those reductions that are not creditable [i.e. the Federal Motor Vehicle Control Program (FMVCP) promulgated before January 1, 1990, gasoline volatility rules promulgated before enactment or required under section 211(h)].

The baseyear inventory plays an important role in modeling demonstrations for moderate and above areas. Guidance is being developed to aid States in preparing emission inventories for photochemical grid modeling (for serious and above areas, and multi-state moderate areas). This guidance will be available in May 1991.

Because the baseyear inventory serves as the basis for so many other inventories, the EPA has prepared general "getting started" guidance for emission inventories. This guidance is to serve as a starting point for States in preparing their 1990 baseyear inventories. The EPA also has prepared updates to the Post-1987 Policy Inventory Requirements Documents for both ozone and carbon monoxide; these documents were available as of March 1991.

Another important aspect of the emission inventory requirements of the CAAA is in section 182(b)(1)(A) and 182(c)(2)(B), which requires a projection inventory to show how the emission reductions (both the 15 percent for moderate and above areas and the 3 percent thereafter for serious and above areas) will be met. The projection inventory for the 15 percent reduction over the first 6 years (for moderate and above areas) is due November 15, 1993, and the projection inventory for the 3 percent per year from 1996 until attainment (for serious and above areas) is due November 15, 1994. The EPA is preparing guidance on projections which will be available in July 1991.

Section 182(g) requires that a milestone demonstration be submitted 90 days after an applicable milestone deadline has passed (a milestone refers to the percent reduction requirements, therefore the first milestone deadline is November 15, 1996). EPA is currently working on guidance to determine what constitutes a milestone demonstration that can be completed by the end of the 90 days period.

Guidance:

- Compilation of air pollutant emission factors, Volume I and Supplements A,B and C (AP-42)
  -- Vol.I - U.S. Government Printing Office (GPO) stock #: 055-000-00251-7
  -- Supplement A - GPO stock #: 055-000-00265-7
  -- Supplement B - GPO stock #: 055-000-00278-9
  -- Supplement C - GPO stock #: 055-000-00369-6

- Compilation of air pollutant emission factors, Volume II, mobile sources, GPO stock # 055-000-00252-5 or NTIS stock # PB87-205266.

- Procedures for emission inventory preparation: mobile sources (EPA-450/4-81-026d) (July 1989; revised version to be completed in May 91)

- AIRS facility subsystem source classification codes (SCCs) and emission factor listing for criteria pollutants (EPA-450/4-90-003) (Mar 90)

- SIP air pollutant inventory management system (SAMS) version 4.0 and SAMS user's manual (Mar 91)
- Emission inventory requirements for ozone State implementation plans (EPA-450/4-91-010) (Mar 91)
- Procedures for the preparation of emission inventories for precursors of ozone, volume 1 (EPA-450/4-88-021) (Dec 88) (to be revised May 91)
- Emission inventory requirements for carbon monoxide State implementation plans (EPA-450/4-91-011) (Mar 91)
- Guidance for the preparation of quality assurance plans for ozone/CO SIP emission inventories (EPA-450/4-88-023) (Dec 88)
- User's guide to MOBILE4 (mobile source emission factor model) (EPA-AA-TEB-89-01) (Feb 89) (revised version to be released with MOBILE 4.1, May 91)
- Quality assurance program for post-1987 ozone and carbon monoxide State implementation plan emission inventories (EPA-450/4-89-004) (Mar 89)
- Procedures for estimating and applying rule effectiveness in post-1987 base year emission inventories for ozone and carbon monoxide State implementation plans (Jun 89)
- Example emission inventory documentation for post-1987 ozone State implementation plans (SIP's) (EPA-450/4-89-018) (Oct 89)
- Guidance for initiating ozone/CO SIP emission inventories pursuant to the 1990 Clean Air Act Amendments (Feb 91)
- VMT projection guidance (May-91)
- Preparing emission inventories for the urban airshed model (UAM) (May 91)
- Revised guidance for the preparation of emission inventories for carbon monoxide and precursors of ozone (May 91)
- Revised guidance for mobile source emission inventories including vehicle miles travelled (May 91)
- Form and content of emission statements for ozone State implementation plans (Sep 91)
- Preparing emission inventory projections (Jul-91)

Conformity

SIP's for all areas must include criteria and procedures by which federal agencies and metropolitan planning organizations (MPO's) must assess the conformity to the SIP of any plan, program, or project subject to federal support or approval or MPO approval. This requirement is contained in section 176(c)(4)(C). Such procedures should be consistent with criteria and procedures that are required to be published by the Administrator (in conjunction with the Secretary of Transportation, as appropriate) by November 15, 1991 (1 year after enactment).

Guidance:

- Criteria to ensure conformity with State implementation plans (SIP's) (Nov 91)

Contingency Measures

Section 172(c)(9) requires nonattainment plans to contain additional measures that will take effect without further action by the State or EPA if an area fails to make reasonable further progress (RFP) or to attain the standard by the applicable date. Section 182(c)(9) provides specific requirements for contingency measures for serious and above ozone areas. Section 187(a)(2) provides specific requirements for contingency measures for CO areas with design values above 12.7 ppm. Section 182(a) specifically exempts marginal ozone areas from the contingency requirements of section 179(c)(9).

The specific requirements of sections 182 and 187, as described above, effectively supersede the section 172(c)(9) general requirements for contingency measures for certain areas. The "remaining" areas (moderate ozone areas and moderate CO areas with design values at or less that 12.7 ppm) must meet the section 172(c)(9) requirements for contingency measures. The contingency measures must be submitted in the 3-year submittal for moderate and above ozone areas and in the 2-year submittal for moderate CO areas (with design values at or below 12.7 ppm). The 4-year submittal for serious and above ozone areas must contain contingency measures related to emission reduction "milestones" that apply after 1996 [section 182(g)]. The General Preamble will provide additional specification as to the requirements for contingency measures.

Additional Ozone Requirements

Many States will have to adopt and implement certain specifically-required control measures, especially in moderate and

above ozone nonattainment areas. The SIP submittal due by November 15, 1992, must include these measures.

RACT on VOC Sources: In addition to correcting SIP's under section 182(a)(2)(A) to include previously required RACT requirements (see RACT Fix-ups), States with moderate, serious, severe or extreme ozone nonattainment areas are required to submit SIP revisions within two years of enactment that contain certain additional RACT measures. These SIP revisions must require the application of RACT to all sources covered by any existing (pre-enactment) Control Technique Guideline (CTG) and to all major sources, even if not covered by a CTG. [Section 182(b) (2), (c), (d) and (e)]. This requirement is sometimes referred to as "RACT Catch-up."

The SIP revision must apply RACT requirements to all VOC sources covered by any CTG issued before the date of enactment of the new law even if the CTG was not previously applicable in the area under EPA's guidance implementing the prior law. Under the prior law, areas with the most serious and persistent nonattainment problems have already had to apply RACT to all sources for which a CTG has been issued. However, as discussed in the EPA guidance on SIP corrections, under the prior requirements, some nonattainment areas have not previously been called upon to apply RACT to all sources for which there were CTG's. These included areas that originally projected attainment by 1982 and were not subject to a later EPA call for SIP revisions. Since the area projected attainment by 1982, they had to apply RACT for the source categories covered by Group I and II CTG's that had been issued at that time, but they were not called upon to apply the Group III CTG's issued after that date. Thus, the new law requires that any moderate and above nonattainment areas not previously subject to all the CTG's to "catch-up" and apply RACT to all sources covered by all the CTG documents. Moderate and above nonattainment areas that have not previously had to apply RACT to sources covered by Group III CTG's will have to do so in the SIP revisions. In addition, areas that had to apply CTG's only to major sources under the prior law will have to revise their SIP's to apply the CTG's to all sources, including non-major sources, that are covered by any CTG. This requirement is not applicable, however, to rural transport areas under section 182(h).

States must also develop and submit RACT rules for all other major stationary sources of VOC in the moderate and above

nonattainment areas even if no CTG has been issued by EPA with respect to that source. [Section 182 (b)(2)(C)]. Areas with the more serious and persistent nonattainment problems have already been required to apply RACT to all major non-CTG VOC sources. Under Section 182 (b)(2)(C), moderate to extreme nonattainment areas which had not been called upon previously to apply RACT to all major sources are required by the new amendments to "catch up" and apply these measures. The definition of major source includes increasingly smaller-size sources in areas with more severe nonattainment problems. For moderate areas, major sources continue to be defined as those that emit, or have the potential to emit, 100 tons per year (tpy). Major sources in serious areas are those that emit, or have the potential to emit, 50 tpy; for severe areas, 25 tpy; and for extreme areas, 10 tpy. See section 182(c), (d) and (e). The major source definition also includes a group of sources located within a contiguous area and under common control. Section 182(c),(d) and (e); House Report p. 234.

In addition, States must submit revisions applying RACT to sources covered by CTG's that EPA issues after enactment of the 1990 Amendments. [section 182 (b)(2)(A)] Schedules for developing RACT rules for these future CTG's will be set forth in each of the CTG's.

Guidance:

- Control techniques guideline (CTG) for control of VOC emissions from surface coating operations: general control methods, Vol. I (EPA-450/2-76-028) (Nov 76)

- Control techniques guideline (CTG) for control of VOC emissions from surface coating of cans, coils, paper, fabrics, automobiles, and light-duty trucks, Vol. II (EPA-450/2-77-008) (May 77)

- Control techniques guideline (CTG) for control of hydrocarbons from tank truck gasoline loading terminals (EPA-450/2-77-026) (Oct 77)

- Control techniques guideline (CTG) for control of refinery vacuum producing systems, wastewater separators & process unit turnarounds (EPA-450/2-77-025) (Oct 77)

- Control techniques guideline (CTG) for control of VOC emissions from solvent metal cleaning (EPA-450/2-77-022) (Nov 77)

- Control techniques guideline (CTG) for control of VOC emissions from surface coating of metal furniture, Vol. III (EPA-450/2-77-032)(Dec 77)

- Control techniques guideline (CTG) for control of emissions from surface coating of magnet wire, Vol. IV (EPA-450/2-77-033) (Dec 77)

- Control techniques guideline (CTG) for control of VOC emissions from surface coating of large appliances, Vol. V (EPA-450/2-77-034) (Dec 77)

- Control techniques guideline (CTG) for control of VOC emissions from storage of petroleum liquids in fixed-roof tanks (EPA-450/2-77-036 or PB 2767491AO3) (Dec 77)

- Control techniques guideline (CTG) for control of VOC's from bulk gasoline plants (EPA-450/2-77-035) (Dec 77)

- Control techniques guideline (CTG) for control of VOC's from use of cutback asphalt (EPA-450/2-77-037) (Dec 77)

- Control techniques guideline (CTG) for control of VOC leaks from petroleum refining (EPA-450/2-78-036) (Jun 78)

- Control techniques guideline(CTG) for control of VOC emissions from coating of miscellaneous metal parts and products(EPA-450/2-78-015)(Jun 78)

- Control techniques guideline (CTG) for control of VOC emissions from surface coating of flat wood paneling (EPA-450/2-78-032) (Jun 78)

- Control techniques guideline (CTG) for control of VOC emissions from manufacture of synthesized pharmaceutical products (EPA-450/2-78-029) (Dec 78)

- Control techniques guideline (CTG) control of VOC emissions from manufacture of pneumatic rubber tires (EPA-450/2-78-030) (Dec 78)

- Control techniques guideline (CTG) for control of emissions from graphic arts rotogravure and flexography (EPA-450/2-78-033) (Dec 78)

- Control techniques guideline (CTG) control of VOC emissions from petroleum liquid storage in external floating roof tanks (EPA-450/2-78-047 or PB290579) (Dec 78)

- Control techniques guideline (CTG) for control of VOC leaks from gasoline tank trucks and vapor collection systems (EPA-450/2-78-051) (Dec 78)

- Control techniques guideline (CTG) control of VOC emissions from large petroleum dry cleaners (EPA-450/3-82-009) (Sep 82)

- Control techniques guideline (CTG) for manufacture of high density polyethylene, polypropylene, and polystyrene resins (EPA-450/3-83-008) (Nov 82)

- Control techniques guideline (CTG) for control of VOC equipment leaks from natural gas/gasoline processing plants (EPA-450/3-83-007) (Dec 83)

- Control techniques guideline (CTG) for control of fugitive emissions from synthetic organic chemical manufacturing industry (SOCMI) (EPA-450/3-83-006) (Dec 83)

- Control technique guideline (CTG) for control of SOCMI air oxidation processes (EPA-450/3-84-01) (Dec 83)

- Control technique guideline (CTG) for control of volatile organic liquids (VOL) storage vessels (Dec 83)

- Issues relating to VOC regulation cutpoints, deficiencies, and deviations: clarification to Appendix D of November 24, 1987 Federal Register (Blue book, revised 1/11/90)

- Implementation of future control measures: a guidance document presenting the criteria for the structure of rules (i.e., appropriate recordkeeping, test methods, etc.) for future measures such as RACT rules, etc. (Nov 91)

- Control Technique Guidelines (CTG's) for 11 Categories (Nov 93)

- Control Technique Guideline (CTG) for Aerospace Coating (Nov 93)

- Control Technique Guideline (CTG) for Shipbuilding and Repairing Industries (Nov 93)

RACT for NO_x Major Sources: The Amendments contain several provisions for reducing emissions of oxides of nitrogen (NO_x) in order to help attain the ozone standard. Subject to certain exceptions (described below), the State plan must provide for the same controls for major stationary sources of NO_x that apply to major sources of volatile organic compounds (VOC's). [Section 182(f)]. Accordingly, (for areas classified as moderate or higher) the State plan must be revised within two years to require the implementation of RACT regulations for major stationary sources of NO_x to the same extent required under section 182(b) (2) (C) and (c), (d), and (e) for sources of VOC's. (See "RACT on VOC Sources" above.)

Under section 182(f), the requirements for NO_x reductions are not applicable (1) if EPA determines that the air quality benefits are greater in the absence of the NO_x reductions or (2) if the reductions do not contribute to attainment of the ozone standard (for an area that is not within an ozone transport region) or produce net air quality benefits (for an area that is within an ozone transport region). EPA, in conjunction with the National Academy of

Sciences, is required to complete (including allowing for a public comment period) within 15 months of enactment (by February 15, 1992) a study that examines the role of NO_x emissions reductions and the extent to which the reductions may be counterproductive in achieving ozone attainment in different areas. [Section 185B.] Any person may petition EPA under section 182(f)(3) to determine the applicability of the exceptions after the final EPA study is submitted to Congress. EPA is to grant or deny the petition within 6 months after submittal.

Guidance:

- EPA study (in conjunction with the National Academy of Sciences) on the role of NO_x emissions reductions and the extent to which the reductions may be counterproductive in achieving ozone attainment in different areas. (submitted to Congress by February 15, 1992 -- 15 months after enactment)

Stage II: Each state must submit a SIP revision requiring, in all moderate, serious, severe, and extreme ozone nonattainment areas, all owners and operators of gasoline dispensing systems to install and operate a gasoline vapor recovery system ("Stage II") used for the refueling of motor vehicles. [Section 182(b)(3)(A)]. Only facilities that sell more than 10,000 gallons of gasoline per month (gal/mo) are subject to these provisions. Independent small business gas marketers are subject to these provisions only if they sell more than 50,000 gal/mo.

After the State adopts these SIP revisions, the following facilities must implement Stage II within the listed time periods:

(1) 6 mos.-- facilities which began construction after November 15, 1990;

(2) 1 year -- facilities dispensing at least 100,000 gal/mo based on the average monthly sales for the two years preceding the date the state adopts Stage II requirements and which did not begin construction after November 15, 1990;

(3) 2 years -- all other facilities.

Once EPA promulgates standards under Section 206(a)(6) requiring that certain vehicles be manufactured with "onboard" vehicle emission control systems, moderate areas are no longer subject to Stage II requirements. EPA may waive or revise Stage II

requirements for serious, severe and extreme areas after EPA determines that onboard controls are in wide-spread use within the existing motor-vehicle fleet.

Guidance:

- Background information on control effectiveness of Stage II vapor recovery systems (Nov 91)

Enhanced I/M Programs: The CAAA require all serious and above ozone areas and moderate CO areas with a design value greater than 12.7 ppm to adopt enhanced inspection and maintenance (I/M) programs. These programs are due within two years of enactment for all urbanized areas with a 1980 population of 200,000 or more. The programs are to comply with EPA guidance (that will be issued within one year of enactment) that defines a performance standard and establishes program administration features. Enhanced I/M programs must include computerized emission analyzers, certain waiver restrictions, and, generally, enforcement through vehicle registration denial and annual centralized testing and inspection. This requirement is contained in section 182(c)(3) for ozone areas and in section 187(a)(6) for CO areas.

Guidance:

- Revised guidance on motor vehicle inspection and maintenance (I/M) programs, including guidance on enhanced I/M (expected to be available by Aug 91)

California Pilot Program for Clean Fuels and "Opt-In" by Other States: California must submit a SIP revision requiring that sufficient clean alternative fuel be produced and distributed in California to support the Title II mandatory clean-fuel vehicle pilot program, which begins in model year 1996. This requirement is contained in section 249(c). The revision must require an adequate number of supply locations with sufficient geographic distribution to ensure convenient refueling of such vehicles.

Any serious, severe or extreme ozone nonattainment area may opt-in to the pilot program by submitting a revision providing incentives for the sale or use of clean-fuel vehicles and clean alternative fuels as mandated in the California program. This requirement is contained in section 249(f). Such revisions must

comply with EPA regulations to be promulgated within two years of enactment, and may not take effect until one year after a state has notified vehicle manufacturers and fuel suppliers of such requirements.

The incentives may include a registration fee on non-clean-fuel vehicles, provisions to exempt clean-fuel vehicles from certain transportation control measures, or preferential parking provisions for clean fuel vehicles. The revisions may not include any production or sales mandates for clean-fuel vehicles or clean alternative fuels, and may not provide sanctions or penalties for failure to produce or sell such vehicles or fuels. In addition, the incentives may not apply to fleet vehicles covered by the clean-fuel vehicle fleet program.

Guidance:

- Guidance for States to Opt-In to California Pilot Program (Nov 92)

Substitutes for Clean-Fuel Vehicle Program: Certain serious, severe, and extreme ozone nonattainment areas (as well as CO areas with design values of 16.0 ppm or higher) are required to submit SIP revisions with clean-fuel vehicle fleet programs (as required by section 296) by May 15, 1994 (42 months after enactment). These programs require fleet operators with over 10 vehicles to start phasing in the use of "clean fuel vehicles" on a set schedule. Areas with 1980 populations of 250,000 or more must adopt the programs.

If an area chooses to adopt and implement another program instead of the clean-fuel vehicle fleet program or the California pilot program, it must submit a SIP revision containing the substitute measure by November 15, 1992. The substitute measures are to comply with guidance to be issued by the EPA and must demonstrate that reductions in ozone precursor and toxic air emissions are equal to those that would be achieved under the clean-fuel vehicle program. Substitute measures may not include any measures otherwise required by the CAAA. Additional discussion of the clean-fuel vehicle fleet program is provided later in this document.

Guidance:

- Clean-fuel vehicle fleet programs for serious ozone areas with populations > 250,000 (Nov 91)

Transportation Control Measures (TCM's): For all severe and extreme ozone areas (and serious CO areas and Denver, CO, as discussed below), plans must include enforceable transportation control measures to offset any growth in emissions from growth in vehicle miles traveled and number of vehicle trips, and to achieve reductions in mobile source emissions as necessary to comply with the periodic emission reduction requirements of the CAAA. These measures are due within two years of enactment. States should choose from measures listed in section 108(f) and should ensure adequate access to areas of high population without relocating emissions and congestion. This requirement is contained in section 182(d)(1)(A) for ozone areas [and section 187(b)(2) for CO areas (section 187(a)(2)(B) for Denver)].

Guidance:

- Evaluation, development, and implementation of transportation control measures (Nov 91)
- Transportation control measures: State implementation plan guidance (final report) (Sep 90)

Employer Trip-Reduction Programs: For all severe and extreme ozone areas, the SIP's submittal must include employer trip-reduction programs. These programs must require employers of 100 or more employees to implement programs that will increase average passenger occupancy per commuting vehicle during rush hours by at least 25% above the average occupancy rate in the area at the time of SIP submittal. The programs are to be consistent with EPA guidance, which may specify average occupancy rates for various locations. The SIP submittals that include these programs are due within two years of enactment, and must require subject employers to submit compliance plans by the fourth year after enactment that demonstrate that the employer will be in compliance by the sixth year of enactment. This requirement is contained in section 182(d)(1)(B).

Guidance:

- Section 108(f) transportation control measure (TCM) information document on employer trip-reduction programs (Nov 91)

New Source Review (NSR) Program: All ozone nonattainment areas must submit within 2 years of enactment NSR programs that comply with the provisions of section 182 that apply to their classification. These requirements will be delineated in rules to be proposed by EPA by September 1991.

Under section 182(f), the State plans must also apply new source review (NSR) to major new sources of NO_x to the same extent required for major new sources of VOC's. [sections 182(a)(2)(C), (c), (d), and (e)] NO_x sources in NO_2 attainment areas must also meet the PSD requirements.

Guidance:

- Permit programs for stationary sources NSR prevention of significant deterioration and nonattainment area guidance notebook (Jan 88)
- Proposed NSR/PSD rule implementing Clean Air Act related changes (Sep 91)
- Model permits for VOC sources (Oct 91)
- Final NSR/PSD rule changes which implement CAAA related changes (Aug 92)
- NSR/PSD Guidance Documents: Draft NSR workshop manual dtd. October 1990 (Dec 90)
- NSR/PSD construction permit transitional guidance (Mar 91)

Requirements for the Transport Region

Some of the above control measures for nonattainment areas must also be implemented throughout the ozone transport region[6] (except in the nonattainment areas, in which more stringent requirements would be in effect). These measures are as follows:

RACT on VOC sources:

- RACT rules for each stationary source category covered by a CTG issued before enactment.
- RACT on major VOC sources not covered by a CTG. Major is defined as having a potential to emit at least 50 tons per year.
- A commitment to adopt RACT rules for source categories covered by CTG's issued after enactment.

RACT on NO_x sources:

- Because of the section 182(f) requirement for applying the same subpart 2 provisions that apply to major VOC sources to major NO_x sources, RACT rules must be developed for major NO_x sources. Exemptions from the NO_x requirement are available if the NO_x reductions would not produce net ozone air quality benefits in the region [as contained in section 182(f)]. A 100-ton major NO_x source definition applies in the region, except for NO_x sources located in serious areas (50 tpy) and severe areas (25 tpy).

NSR on VOC and NO_x sources:

- The New Source Review (NSR) program must apply throughout the region to VOC and NO_x sources. The definitions of major source for VOC and NO_x sources are the same as the VOC and NO_x definitions used for RACT requirements in the region. Exemptions from the NO_x requirement are available if the NO_x reductions would not produce net ozone air quality benefits in the region [as contained in section 182(f)].

Enhanced I/M:

- For areas within an ozone transport region, all MSA's or CMSA's with populations of 100,000 or more must have enhanced I/M programs, even if they are designated attainment or unclassifiable for ozone. This requirement is contained in section 184(b)(1)(A).

Additional CO Requirements

VMT Forecast: For all moderate CO areas with a design value above 12.7 ppm, states must forecast vehicle miles travelled (VMT) for each year until the projected attainment date and subsequently update the forecasts annually, including estimates of actual VMT in each past year. In addition, plans must contain contingency measures to take effect automatically if actual VMT levels or updated projections exceed the previously projected levels (see discussion below). The VMT forecasts must comply with EPA guidance to be promulgated within six months of enactment in consultation with the Department of Transportation. This requirement is contained in sections 187(a)(2) and (3).

Guidance:

- Guidance on forecasting vehicle miles of travel (VMT) (May 91)

NSR Program: All CO areas with design values above 12.7 ppm must submit NSR programs at the time their attainment demonstrations are due (i.e., within 2 years of enactment--see discussion below). The provisions of these plans must be developed in accordance with the requirements of sections 172(c)(5) and 173. The rules to be proposed by EPA by September 1991 will also delineate the requirements for CO NSR programs. The General Preamble will describe the schedule for adopting NSR rules in other CO areas (i.e., those with design values at or below 12.7 ppm).

Guidance:

- Permit programs for stationary sources NSR prevention of significant deterioration and nonattainment area guidance notebook (Jan 88)
- Proposed NSR/PSD rule implementing Clean Air Act related changes (Sep 91)
- Model permits for VOC sources (Oct 91)
- Final NSR/PSD rule changes which implement CAAA related changes (Aug 92)
- NSR/PSD Guidance Documents: Draft NSR workshop manual dtd. October 1990 (Dec 90)
- NSR/PSD construction permit transitional guidance (Mar 91) (see Appendix)

CO Areas with Significant Stationary Source Contributions: Any CO area may apply to the Administrator for case-by-case waivers of any requirements pertaining to transportation controls, I/M or oxygenated fuels where the Administrator determines that mobile sources of CO do not contribute significantly to CO levels. For serious areas in which stationary sources do make a significant contribution to CO levels (as determined under guidance to be issued by EPA by May 15, 1991), each such area must submit within 2 years after enactment (November 15, 1992) a plan revision to lower the major stationary size cutoff to 50 tons per year. This provision is contained in section 187(c)(1).

Guidance:

- Guidelines for and rules determining whether stationary sources contribute significantly to CO levels in an area (May 91)

Enhanced I/M: The CAAA require moderate CO areas with a design value greater than 12.7 ppm to implement enhanced I/M programs in urbanized areas with a 1980 population of 200,000 or more. The programs are to comply with EPA guidance (to be issued within one year of enactment) that defines a performance standard and establishes program administration features. Enhanced I/M programs must include computerized emission analyzers, certain waiver restrictions, enforcement through vehicle registration denial, and, generally, annual centralized testing and inspection. This requirement is contained in section 187(a)(6) for CO areas.

Guidance:

- Revised guidance on motor vehicle inspection and maintenance (I/M) programs, including guidance on enhanced I/M (Aug 91)

Contingency Measures: Section 187(a)(3) requires that all carbon monoxide (CO) nonattainment areas with a design value greater than 12.7 ppm must submit a plan revision containing contingency measures. The contingency measures would be implemented if the estimate of actual VMT which is submitted in an annual report exceeds the most recent prior forecast of VMT (discussed above). [See section 187(a)(2)]. Additionally, failure of an area to attain the CO national ambient air quality standard by the applicable attainment date would also trigger implementation of the contingency measures. The CAAA state that the contingency measures are to take effect without further action by the State or EPA, which indicates that the measures should be pre-adopted by the State before submittal to EPA. The contingency measures should be transportation control measures and trip reduction ordinances directed at reducing VMT and mobile source emissions, but other types of measures may also be included.

Guidance:

- Contingency Measures (general guidance and specific guidance for ozone and CO areas) (Nov 91)

Transportation Control Measures (TCM's): Serious CO areas (and Denver, Colorado) must adopt and implement enforceable transportation control measures, as specified for certain ozone areas in section 182(d)(1), to (1) offset any growth in emissions from increases in vehicle miles traveled and in numbers of vehicle trips, and (2) achieve reductions in mobile source emissions as necessary to comply with the periodic emission reduction requirements of the CAAA. States should choose from measures listed in section 108(f) and should ensure adequate access to areas of high population without relocating emissions and congestion. This requirement is contained in section 187(b)(2) for CO areas [section 187(a)(2)(B) for Denver]. All CO areas covered by the clean-fuel vehicle fleet program (except for New York) as well as Denver must explain why any section 108(f) measure is not adopted, what emission reduction measures provide comparable reductions, or why such reductions are not necessary to attain the CO NAAQS.

Guidance:

- Guidance on transportation control measures (TCM's) (Nov 1991)

Oxygenated Fuels: The CAAA require CO areas to adopt SIP provisions regulating the oxygen content of gasoline in accordance with the program prescribed in Title II[7]. All CO nonattainment areas with design value of 9.5 ppm or above must submit revisions which require that all gasoline sold within the CMSA containing the nonattainment area (or MSA if the area is not located in a CMSA) contain at least 2.7 percent oxygen by weight during that portion of the year in which the area is prone to high CO concentrations. This requirement is contained in section 211(m). The relevant period during which the program must apply shall be determined by the Administrator, and shall not be less than four months unless the state demonstrates that a shorter period will suffice to assure that no CO NAAQS exceedances occur outside of that period. These programs must take effect by November 1, 1992. The Administrator can waive or delay these requirements under certain conditions related to the effect of attainment of any other NAAQS, the contribution of stationary sources to the nonattainment problem, or the domestic supply or distribution capacity for oxygenated fuels. These conditions as well as other details of the oxygenated fuels requirement will be addressed in the guidance on the oxygenated fuels program anticipated to be published in August 1991.

Guidance:

- Guidelines for the implementation of oxygenated fuel programs, including information on the use of marketable credits (Aug 91)

Attainment Demonstration: Section 187(a)(7) requires all CO areas with a design value greater than 12.7 ppm to submit a demonstration that their plans will be sufficient to provide for attainment by the required deadline and annual emission reductions as necessary to achieve the standard by that date. This demonstration is due by November 15, 1992 (2 years after enactment).

Substitutes for Clean-Fuel Vehicle Program: CO areas with design values of 16.0 ppm or higher (as well as certain serious, severe, and extreme ozone nonattainment areas) are required to submit SIP revisions with clean-fuel vehicle fleet programs (as required by section 296) by May 15, 1994 (42 months after enactment). These programs require fleet operators with over 10 vehicles to start phasing in the use of "clean fuel vehicles" on a set schedule. Areas with 1980 populations of 250,000 or more must adopt the programs.

If an area chooses to adopt and implement another program instead of the clean-fuel vehicle fleet program or the California pilot program, it must submit a SIP revision containing the substitute measure by November 15, 1992. The substitute measures are to comply with guidance to be issued by the EPA and must demonstrate that reductions in CO and toxic air emissions are equal to those that would be achieved under the clean-fuel vehicle program. Substitute measures may not include any measures otherwise required by the CAAA. Additional discussion of the clean-fuel vehicle fleet program is provided later in this document.

Guidance:

- Clean fuel fleet programs for serious ozone areas with populations > 250,000 (Nov 91)

Planning Procedures

Each State with an ozone or carbon monoxide nonattainment area is to review and update the SIP planning procedures or develop new planning procedures as appropriate. The planning procedures pertain to all implementation plan(s) required under Part D of the Act. This action is to be undertaken jointly with elected officials of affected local governments. The requirement is contained in section 174 (a).

State planning procedures must identify the degree of participation in planning and implementation of the SIP by various governmental bodies. That is, the procedures are to set forth which implementation plan elements are to be developed, adopted, implemented and enforced by the state and local governments or regional agencies, or combination thereof. The procedures must also identify the designated SIP planning agency responsible for preparation of the implementation plan or elements of the plan taking into account the participation determinations stated above.

To meet this requirement, EPA is requesting that each state jointly review its current SIP planning procedures with officials of affected local governments and submit either 1) a letter to EPA for acceptance which affirms its current EPA-approved SIP planning procedures without change and describes, at a minimum, the items previously noted; or, 2) if updating and development are necessary, a SIP revision containing the newly updated and developed planning procedures.

Guidance:

- Transportation control measures: State implementation plan guidance (final report) (Sep 90)
- Update of the June 6, 1978 Transportation Air Quality Guidelines (Aug 91)
- State and local transportation planning procedures (Aug 91)
- Guidance on consultation on transportation-related aspects of SIPs (Nov 91)

Actions Due by November 15, 1993 (36 months after enactment)

Plan for Reasonable Further Progress (RFP) (15% reduction requirement)

Section 182(b)(1) requires all ozone nonattainment areas classified moderate and above to submit a plan revision containing additional measures as necessary to provide for net reductions in volatile organic compound (VOC) emissions of at least 15 percent during the first six years after enactment. The baseline from which the 15 percent reduction is calculated is defined as all anthropogenic emissions during calendar year 1990 excluding the emissions that would be eliminated by (1) regulations under the Federal Motor Vehicle Control Program (FMVCP) promulgated by January 1, 1990, and (2) gasoline volatility (or RVP--Reid Vapor Pressure) regulations promulgated by November 15, 1990 or required to be

promulgated under section 211(h). Emission reductions from the following types of regulations are not creditable toward the 15 percent progress requirement:

- FMVCP regulations promulgated by EPA by January 1, 1990
- RVP regulations promulgated by EPA by November 15, 1990 or required to be promulgated under section 211(h)
- Regulations submitted to correct deficiencies in existing VOC RACT regulations as required under section 182(a)(2)(A)
- Regulations submitted to correct deficiencies in I/M programs as required under section 182(a)(2)(B)

A nonattainment area can achieve less than the 15 percent required reductions if the State can demonstrate that (1) the area has a new source review program equivalent to the requirements in extreme areas [Section 182(e)], except that "major source" must include any source which emits, or has the potential to emit, 5 tons per year of VOC's. Additionally, all major sources (down to 5 tons per year) in the area must have RACT level controls. The plan must also include all measures which can be feasibly implemented in the area in light of technological achievability. Finally, the State must demonstrate that the plan includes all measures achieved in practice by sources in the same source category in nonattainment areas of the next higher classification. The waiver for the 15 percent progress requirement cannot apply to nonattainment areas classified as extreme.

In addition to the 15 percent progress requirement for reducing VOC emissions, section 182(b)(1)(A) also requires that the plan due by November 15, 1993, provide for specific annual reductions of VOC and NO_x necessary to attain the standard by the applicable attainment date. States must show in this submittal that their plans will reduce VOC and NO_x emissions sufficiently to attain the standard by the applicable date. (See discussion below regarding demonstration requirements for serious and above areas.) The requirement for reductions in NO_x will not apply if EPA determines that such reductions do not contribute to attainment of the ozone standard. [Moderate multi-state ozone areas must use a photochemical grid model for their demonstrations. The General Preamble will describe the specific requirements and schedules for these submittals.]

Section 182(c)(2)(A) specifies that serious and above areas must base their attainment demonstrations (due 4 years after enactment)

on photochemical grid modeling. This demonstration for serious and above areas will satisfy the requirement under section 182(b)(1)(A) (discussed above) to "provide for specific annual reductions in VOC and NO_x reductions as necessary to attain" by the applicable deadline.

Guidance:

- Determining and calculating emission reductions needed to ensure reasonable further progress (15% reduction of VOC emissions within 6 years in moderate ozone areas plus 3% annual reductions beginning 6 years after enactment in serious areas) and demonstration of attainment (specific annual reductions in VOC and NO_x emissions to attain NAAQS) (Nov 91)

- Guidance (pursuant to section 183(d)) on analyzing cost-effectiveness of different options for emissions controls (This guidance should aid States in developing cost-effective control strategies.) (Nov 91)

Contingency Measures

Section 182(c)(9) requires that all ozone nonattainment areas classified serious or higher must submit a plan revision to provide for contingency measures. The contingency measures would be implemented if the area fails to meet any applicable milestone under Section 182(g). The CAAA state that the contingency measures are to take effect without further action by the State or EPA, which implies that the measures should be pre-adopted by the State before submittal to EPA. Since contingency measures are needed with each "set" of measures submitted to meet required milestones, States must submit contingency measures within 3 years from enactment for the SIP revision that will achieve the 15 percent VOC emission reduction, as required in section 182(b)(1)(A). Similarly, contingency measures must be included in the submittal required within 4 years from enactment that will demonstrate attainment and show annual average emission reductions equal to at least 3 percent. [section 182(c)(2)]

Section 172(c)(9) provides general contingency requirements which are applicable to moderate ozone areas. These measures would be implemented if the area failed to make reasonable further progress (RFP) or to attain by the applicable date. The contingency measures are required in the 3-year submittal since it is that submittal for moderate areas that provides for RFP and attainment of the standard.

Actions Due by November 15, 1994 (48 months after enactment)

Attainment Demonstration

Section 182(c)(2) requires that serious and above ozone nonattainment areas submit an attainment and reasonable further progress (RFP) demonstration within 4 years after enactment. The attainment demonstration must be based on photochemical grid modeling or any other analytical method determined by EPA to be at least as effective. The RFP demonstration must provide for average annual reductions in VOC emissions of at least 3 percent per year (averaged over 3 year periods) until the attainment date.

A nonattainment area can achieve less than the 3 percent per year required reductions if the State can demonstrate that the plan includes all measures which can be feasibly implemented in the area, in light of technological achievability. The State must also demonstrate that the plan includes all measures achieved in practice by sources in the same source category in nonattainment areas of the next higher classification. The waiver for the 3 percent per year progress requirement cannot apply to nonattainment areas classified as extreme. A determination of the waiver from the 3 percent per year requirement will be reviewed at each milestone under 182(g) and revised to reflect the availability of any new technologies or other control measures for sources in the same category. The baseline for the 3 percent per year reductions and creditability requirements are the same as for the 15 percent progress requirement under Section 182(b)(1).

Emission reductions from NO_x sources can be substituted for VOC emission reductions if the resulting reduction in ozone concentrations is at least as equivalent to that which would result from VOC emission reductions. NO_x emission reductions are subject to the creditability provisions under section 182(b)(1)(C) and (D).

Guidance:

- Guidance regarding the conditions under which NO_x control may be substituted for VOC control or combined with VOC control to maximize the reduction of ozone concentrations (Nov 91)

- Guideline on Air Quality Models, including Supplement B, provides guidance on determining equivalent analytical methods (latest version expected to be published in late 1991)

Contingency Measures

As discussed above under the 3-year submittal requirements for ozone areas, section 182(c)(9) requires ozone nonattainment areas classified serious or higher to submit a plan revision to provide for contingency measures. The contingency measures would be implemented if the area fails to meet any applicable milestone under Section 182(g). The CAAA state that the contingency measures are to take effect without further action by the State or EPA, which implies that the measures should be pre-adopted by the State before submittal to EPA. The 3-year submittal contains contingency measures for measures submitted to meet the 15 percent VOC emission reduction requirement [section 182(b)(1)]. The 4-year submittal contains contingency measures for measures submitted to meet the attainment demonstration and RFP requirements of section 182(c)(2).

Clean-Fuel Vehicle Fleet Programs

The CAAA contain certain requirements for specified serious ozone areas to adopt SIP provisions to implement the clean-fuel vehicle programs prescribed in Title II. This requirement is contained in section 182(c)(4).

All serious ozone nonattainment areas with a 1980 population of 250,000 or more, and all CO nonattainment areas with 1980 population of 250,000 or more and design value of 16.0 ppm or higher (excluding areas where mobile sources do not contribute significantly to CO exceedances), must submit SIP revisions providing for clean-fuel vehicle fleet programs *by May 15, 1994, (42 months from enactment)*. This requirement is contained in section 296.

The programs must require a specified percentage of fleet vehicles in model year 1998 and thereafter to be clean-fuel vehicles and use clean alternative fuels when operating in the area. For light-duty vehicles and light-duty trucks the required percentage must be 30% in 1998, 50% in 1999 and 70% in 2000. For heavy-duty trucks the percentage must be 50% in each such year. Light-duty vehicles and light-duty trucks for these model years must also meet the Title II clean-fuel vehicle standards for model year 2001. If such vehicles are not available in California in advance of model year 2001, the phase-in schedules will be delayed accordingly.

Some of the major program requirements include: requirements for fuel providers to make clean alternative fuel available to fleet

operators; coverage of federal fleets (except certain vehicles certified by the Secretary of Defense on national security grounds); provisions for the issuance of credits (consistent with EPA regulations due 1 year from enactment) for purchasing more vehicles than required or vehicles which meet more stringent standards, or purchasing vehicles prior to the effective date of the program. In addition, certain transportation control measures may not apply to covered fleet vehicles, consistent with EPA regulations due 1 year from enactment.

Guidance:

- Clean fuel fleet programs for certain ozone and CO areas with populations > 250,000 (Nov 92)
- Regulations regarding the issuance of credits and the applicability of transportation control measures to clean fuel fleets (Nov 91)

Requirements for the Ozone Transport Region

All attainment areas and all nonattainment areas not otherwise subject to Stage II requirements will be subject to Stage II requirements or other control measures capable of achieving comparable emission reductions. [Section 184(b)(2)]. By November 15, 1993, EPA will complete a study identifying control measures capable of achieving emission reductions comparable to those achievable by Stage II. Within one year of that time, each state in an ozone transport region must submit a SIP that reflects the implementation of either these comparable measures identified by EPA or Stage II.

Part 3: Transition Requirements

Phase II of SIP Calls

EPA has issued SIP calls under section 110(a)(2)(H) of the Clean Air Act (prior to the 1990 Amendments) to many areas based on a finding that the SIP's for those areas were substantially inadequate to provide for timely attainment of the ozone and/or CO NAAQS[8]. In these SIP calls, EPA stated that states should respond in two phases to produce SIP's that would be adequate to attain and maintain the standards. EPA first required states, in Phase I of their response, to update their emission inventories and make corrections in previously required regulations imposing reasonably available

control technology (RACT) on existing stationary sources. Phase I responses were due generally in the Fall of 1989.

EPA has advised states that they could delay submitting Phase II responses that would include a full attainment demonstration and all additional regulations necessary to support such demonstrations until EPA completed its policy on post-1987 nonattainment planning. Since EPA did not complete its post-1987 ozone/CO policy in anticipation of passage of the amendments to the Act, EPA has never set a date for Phase II SIP call responses[9]. However, the basis underlying the SIP calls remains valid even under the amended Act. The SIP's for the affected areas are still substantially inadequate to attain the relevant NAAQS. Since the date for submission of Phase I SIP call responses has already passed, and the amended Act requires all areas subject to the RACT-correction aspects of the SIP calls to submit those corrections within six months of enactment, the requirement for the Phase I response to the SIP calls remains in effect. Thus, all areas currently subject to the RACT-correction aspects of the 1988 and 1989 ozone SIP calls under the 1977 Act should submit RACT corrections as soon as possible.

However, as to Phase II SIP call responses, the amended Act alters both the substantive requirements and submission deadlines for full attainment demonstrations and their component control measures. Thus, although the obligation to submit a SIP adequate to attain and maintain the NAAQS remains in all SIP call areas, both the necessary elements of such plans and the timing of the plan submissions is now governed by the requirements of sections 182 and 187 of the amended Act. EPA therefore will not require Phase II SIP call response submissions on any schedule different from the schedules established by those sections. States should respond to Phase II of the SIP calls by making the submissions otherwise required by sections 182, 184 and 187[10].

It should be noted that section 173(b) of the amended Act restricts the use of growth allowances in all areas that received SIP calls under the 1977 Act. The fact that EPA is not requiring the submission of separate Phase II SIP call responses does not affect this provision; all of these areas remain areas that received SIP calls under the 1977 Act.

Lifting of Construction Bans

The amended Act repeals the provisions found in section 110(a)(2)(I) of the 1977 Act that authorized EPA to impose a construction moratorium in nonattainment areas that fail to submit plans meeting all of the requirements of Part D of the Act. The amended Act also contains a savings clause in section 110(n)(3) that preserves certain existing construction bans; construction bans remain in place only where imposed by virtue of a finding that (1) the plan for the area did not contain an adequate new source review permitting program as required by section 172(b)(6) of the 1977 Act, or (2) the plan failed to provide for timely attainment of the SO_2 NAAQS.

Thus, EPA can not impose or retain in effect any construction ban previously imposed based on a finding that the plan for the area did not demonstrate timely attainment and maintenance of the ozone or CO NAAQS. EPA will shortly promulgate a rule amending its regulations at 40 CFR 52.24 to clarify the limited applicability of the construction ban and to repeal the individual sections of 40 CFR Part 52 that impose the construction ban in each ozone or CO nonattainment area where the ban was imposed solely for failure to provide for timely attainment.

Since the Act no longer authorizes EPA to impose bans on this basis, EPA interprets the Act as repealing these bans by operation of law as of enactment, and considers these amendments to Part 52 as mere administrative housekeeping responsibilities. EPA will treat areas previously subject to the construction ban under these circumstances as no longer subject to the ban as of enactment.

It should be noted that where construction bans were imposed for failure to demonstrate timely attainment of the ozone or CO NAAQS and also for failure to contain an adequate new source review permitting program, the ban will remain in effect under the savings clause unless and until the state has submitted and EPA has approved such a permitting program. However, where the ban was originally imposed based only upon a finding that the plan did not provide for timely attainment and maintenance, even if the area in fact did not have an approved new source review permitting program, the savings clause will not preserve the construction ban since the ban is only preserved where it was imposed based on a finding that the plan did not contain an adequate permitting program. Such areas should of course promptly submit adequate permitting programs, but they will not be subject to a ban in the interim.

SIP Processing Procedures

The amended Act revises the procedures for EPA processing of SIP revisions. Under new section 110(k), EPA is to promulgate, within nine months of enactment, minimum criteria that plan submissions must meet before EPA is required to act on them. EPA promulgated SIP completeness criteria in February 1990 (55 FR 5824), and will now decide whether such criteria are adequate under the amended Act or whether EPA will supplement them within nine months. Once EPA has promulgated minimum completeness criteria, EPA must determine within 60 days of its receipt of any SIP submission whether the submission is complete with respect to these criteria. If EPA determines that the submission is complete, EPA must act on the SIP revision within 12 months of its determination. However, if EPA determines that the submission is incomplete, the State is treated as having failed to make the required submission for purposes of the sanctions provisions of the Act. EPA must also make a completeness determination with respect to any required submission within 6 months of the date the State is required to make the submission, regardless of the actual date of submission, if any. Finally, SIP submissions are deemed to be complete six months after submission if EPA fails to make any completeness determination by that date.

EPA is authorized to approve plans in whole or in part, to initiate corrections to prior approvals without a subsequent submission, and to conditionally approve SIP revisions based upon the State's commitment to adopt enforceable measures within one year. Such approvals automatically become disapprovals if the commitments are not subsequently met.

NSR Transition Issues and Guidance

The CAAA make numerous changes to the NSR requirements. The EPA will publish a regulatory package (propose in September 1991; finalize in August 1992) that will implement these and other changes to the NSR provisions. To address the many situations expected to arise in the interim period between passage of the CAAA and adoption of the final regulations, EPA has issued a memorandum[11] which provides guidance on several possible issues (including those particularly in nonattainment areas). This memorandum is contained in the Appendix.

Part 4: EPA Actions

Control Measures

The EPA will be developing a number of guidance materials regarding the planning and control requirements for States. These materials include new and revised control technique guidelines (CTG's), alternative control technique (ACT) documents, and rules for commercial and consumer solvents. Also to provide assistance in the adoption and implementation of control measures, EPA will be operating a RACT/BACT/LAER[12] clearinghouse.

New CTG's

Section 183 of the CAAA requires EPA to issue eleven new control technique guidelines (CTG's) within three years of enactment, that is, by November 15, 1993. In issuing these guidelines, priority is to be given to those which the Administrator considers to make the most significant contribution to ozone in nonattainment areas. States with ozone nonattainment areas classified as moderate, serious, severe or extreme are to revise their SIPs, by the date specified by EPA in issuing the new CTG, to apply RACT requirements to sources covered by the CTG's. [Section 182(b)(2)].

Also by November 15, 1993, EPA is to issue CTG's providing for best available control measures for VOC emissions from aerospace, ship building, and ship repair coatings and solvents. [Section 183 (b)(3) and (4)].

Alternative Control Technology (ACT)

Under section 183 (c), the Administrator is required to issue "technical documents" within three years of enactment which identify alternative controls for all categories of stationary sources that emit or have the potential to emit 25 tpy of VOC's or oxides of nitrogen (NO_x). The EPA has discussed these ACT documents in a November 24, 1987 Federal Register Notice, 52 F.R. 45043, 45090. The documents do not establish a presumptive RACT norm nor do they recommend a minimum level of control. Instead, they are information documents that identify control technologies that are available for a particular source category which a State can use as a basis for an emission limit based on local needs and circumstances.

Commercial and Consumer Solvent Study and Rules

The EPA is to complete a study within three years of enactment of VOC emissions from consumer and commercial products in order to determine their potential to contribute to ozone levels which violate the NAAQS. [Section 183 (e)(2)]. The study is also to establish criteria and priorities for regulating the products, based on factors such as the benefits and commercial demand for the products, health or safety functions, emission of highly reactive VOC's, products subject to the most cost-effective controls, and the availability of alternatives of comparable cost. Based on the study, EPA is to regulate products that account for 80% of VOC emissions from consumer or commercial products in ozone nonattainment areas. The products are to be divided into four groups and a group is to be regulated every two years following the study.

States may develop procedures for implementing and enforcing the EPA regulation, and if the procedures are adequate, EPA is to approve the procedure. The EPA may also issue CTG's in lieu of federal regulations if EPA determines the CTG's will be substantially as effective.

RACT/BACT/LAER Clearinghouse

Under section 108(h), EPA will continue to maintain a central database to make information available to the States and public on emission control technology, including information from state plans requiring permits.

Revisions of Existing CTG's

Within 3 years, the Agency is to review and, if necessary, revise any CTG's in effect at that time, and to continue to do so periodically thereafter. [Section 183 (b)(1)].

ENDNOTES

1. These classifications, in turn, triggered (i) the 45-day process in which States could request additional time to study the boundaries for ozone and CO nonattainment areas that were classified upon enactment as serious, severe, or extreme and (ii) the 90-day opportunity for the Administrator to consider adjusting the classification for nonattainment areas under the 5 percent provision (under which an area whose air quality placed it within 5 percent of the next higher or lower classification could be reclassified to that classification). Since actions related to these processes have already occurred, the discussion of the actions is limited in this document.

2. Areas newly designated to nonattainment in this 240-day process will be classified at the conclusion of this process, and their classification will in turn trigger (i) the 45-day process regarding nonattainment boundaries for certain ozone and CO areas classified as serious or above and (ii) the 90-day opportunity for the Administrator to consider adjusting the classification for nonattainment areas under the 5 percent provision (under which an area whose air quality placed it within 5 percent of the next higher or lower classification could be reclassified to that classification).

3. Similar situations can arise for CO nonattainment areas, but the CAAA did not specifically address such cases. The General Preamble will explain EPA's approach for dealing with these areas. In general, EPA expects these areas to be subject to existing subpart 1 of part D requirements but not to the new requirements of subpart 3 (i.e., the requirements in section 187). Such areas would also be subject to the redesignation procedures and requirements that will be described in the General Preamble.

4. The EPA is required to publish revised I/M guidance within 1 year after enactment (i.e., by November 15, 1991); however, such guidance is expected to be published by August 1991.

5. The commission is composed of the Governors of the affected States (or their designees), State air pollution control officials (appointed by the Governors), the EPA Administrator (or his designee), and the EPA Regional Administrators included in the affected transport region (or their designees).

6. The CAAA established an ozone transport region comprising Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the CMSA including Washington, D.C. These States (and the Washington, D.C. CMSA) must submit the controls described here. Should other transport regions be established in the future, States in those regions would have 9 months to submit these measures.

7. The language in Title II actually applies the oxygenated fuels requirement to most CO areas rather than only to those in serious areas.

8. These SIP calls were issued in 1988 and 1989 (53 FR 34500 and 55 FR 30973).

9. EPA was compelled to set Phase II response deadlines for nonattainment areas in New Jersey, New York, Boston and San Francisco pursuant to litigation in these areas. These areas are currently under an obligation to make such submissions by September 30, 1991.

10. In addition, EPA is altering the Phase II response schedules previously established for New Jersey, New York, Massachusetts and California. Rather than making such submissions by September 30, 1991, these areas should respond to Phase II of the SIP calls by making the submissions required by sections 182 and 187.

11. Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, to EPA Regional Air Division Directors on "New Source Review (NSR) Program Transitional Guidance," dated March 11, 1991.

12. RACT -- reasonably available control technique; BACT -- best available control technology; LAER -- lowest achievable emission rate.

Appendix

- EPA Guidance on Existing RACT Requirements
- EPA Memorandum: "New Source Review (NSR) Program Transitional Guidance"
- Guidance for State Submittals under the Clean Air Act of 1990

EPA Guidance on Existing RACT Requirements

- Proposed Policy on Approval of Post-1987 Ozone and Carbon Monoxide Plan Revisions for Areas Not Attaining the NAAQS, including Appendix D -- Discrepancies and Inconsistencies Found in Current SIPs, published in the Federal Register, 52 FR 45043,45049 (November 24, 1987).

- Notice of SIP Inadequacy and Call for SIP Revision--Information Notice, 53 FR 34500 (September 7, 1988) [1988 SIP Call], and 55 FR 30973 (July 30, 1990) [1990 SIP Call].

- Issues relating to VOC Regulations, Cutpoints, Deficiencies and Deviations [generally referred to as the Bluebook]; notice given in 1988 SIP Call, 53 FR 34500, 34507 (September 7, 1988) and 1990 SIP Call, 55 FR 30973, 30975 (July 30, 1990).
- 1984 Guidance Document for Correction of Part D SIPs for Nonattainment Areas (Notice of Availability published in 49 FR 18827, 18828 (May 3, 1984)).

- Final Policy on SIPs; Approval of 1982 Ozone and CO Plan Revisions for Areas Needing and Attainment Date Extension, published in 46 FR 7182, 7186 (January 22, 1981).

- April 4, 1979 Notice on SIPs; General Preamble for Proposed Rulemaking on Approval on Plan Revisions for Nonattainmemt Areas (44 FR 20371).

- September 17, 1979 Notice--Supplement on Control Technique Guidelines (44 FR 53761).

- May 19, 1978 Notice of Policy Memorandum (43 FR 21673).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

MAR 11 1991

MEMORANDUM

SUBJECT: New Source Review (NSR) Program Transitional Guidance

FROM: John S. Seitz, Director
Office of Air Quality Planning and Standards (MD-10)

TO: Addressees

The Clean Air Act Amendments of 1990 (1990 Amendments) make numerous changes to the NSR requirements of the prevention of significant deterioration (PSD) and nonattainment area programs. The 1990 Amendments create new and expanded nonattainment areas, extend PSD coverage to current Class I area boundaries, and mandate a PSD exemption for certain hazardous air pollutants. The Environmental Protection Agency (EPA) intends to propose by September of this year a regulatory package that will implement these and other changes to the NSR provisions. Final adoption of these revised regulations is projected for August 1992. In the interim period between passage of the 1990 Amendments and adoption of the Agency's final regulations, EPA expects that numerous issues regarding the 1990 Amendments will arise. This memorandum sets forth the Agency's position on the most important of these transitional issues involving the NSR program.

This guidance document does not supersede existing State regulations or approved State implementation plans. However, in some cases, it calls upon States to implement their NSR programs in a manner consistent with provisions of the 1990 Amendments that are applicable immediately and with the requirements that flow directly from these provisions. Nonetheless, the policies set out in this transition memorandum are intended solely as guidance and do not represent final Agency action. They are not ripe for judicial review for this reason. Moreover, they are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. The EPA officials may decide to follow the guidance provided in this memorandum, or to act at variance with the guidance, based on an analysis of specific circumstances. The Agency also may change this guidance at any time without public notice.

The Regional Offices should send this guidance document to their States. Questions from States and applicants concerning specific issues and cases should be directed to the appropriate EPA Regional Office. If you have any general questions, please contact Mr. Michael Sewell of the New Source Review Section at FTS 629-0873 or (919) 541-0873.

Attachment

Addressees
Director, Air, Pesticides, and Toxics Management Division,
Regions I, IV, and VI
Director, Air and Waste Management Division, Region II
Director, Air Management Division, Regions III and IX
Director, Air and Radiation Division, Region V
Director, Air and Toxics Division, Regions VII, VIII, and X

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New Source Review (NSR) Transitional Guidance

Toxics and National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Issues

1. Section 112 Hazardous Air Pollutants are No Longer Considered Regulated Pollutants Under Prevention of Significant Deterioration (PSD), but NESHAPS Still Apply

Under the 1977 Amendments to the Clean Air Act (Act) and regulations issued thereunder, the PSD requirements of the Act apply to all "major" new sources and "major" modifications, i.e., those exceeding certain annual tonnage thresholds [see 40 CFR 52.21(b)(1)(i) and (b)(2)(i)]. Typically, new sources and modifications become subject to PSD because they exceed the specified tonnage threshold for a criteria pollutant, i.e., a pollutant for which a national ambient air quality standard (NAAQS) has been established under section 109 of the Act. Once a new source or modification is subject to PSD, the PSD requirements apply to every pollutant subject to regulation under the Act that is emitted in "significant" quantities (or, in the case of a major modification, for which there is a significant net emissions increase) [see 40 CFR 52.21(b)(23) and (i)(2)]. Under the 1977 Amendments, best available control technology (BACT) and other PSD requirements apply not only to emissions of criteria pollutants but also to emissions of pollutants regulated under other provisions of the Act, such as section 111 or 112. This regulatory structure was altered by the 1990 Amendments.

Title III of the 1990 Amendments added a new section 112(b)(6) that excludes the hazardous air pollutants listed in section 112(b)(1) of the revised Act (as well as any pollutants that may be added to the list) from the PSD (and other) requirements of Part C. Thus, because they are on the initial Title III hazardous air pollutants list, the following pollutants, which had been regulated under PSD because they were covered by the section 112 NESHAPS or section 111 new source performance standards (NSPS) program, are now exempt from Federal PSD applicability:

- arsenic
- asbestos
- benzene (including benzene from gasoline)
- beryllium
- hydrogen sulfide (H_2S)
- mercury
- radionuclides (including radon and polonium)
- vinyl chloride.

The Title III exemption applies to final Federal PSD permits (i.e., those issued in final form and for which administrative appeals, if any, under 40 CFR 124.19 have been exhausted) issued on or after the date of enactment of the 1990 Amendments (November 15, 1990). For Federal PSD permit applications now under review by either an EPA Regional Office or a delegated State, PSD permit requirements do not apply to the pollutants exempted by Title III. For Federal PSD permits containing PSD requirements for the pollutants exempted by Title III issued on or after November 15, 1990, the permittee may request a revision (e.g., removal of a BACT limit for benzene) to their PSD permit to reflect the Title III exemption from Federal PSD applicability.

Note that pursuant to section 116 and the preservation clause in section 112(d)(7) of the amended Act, States with an approved PSD program may continue to regulate the Title III hazardous air pollutants now exempted from Federal PSD by section 112(b)(6) if the State PSD regulations provide an independent basis to do so. These State rules would remain in effect unless a State revised them to provide similar exemptions. Additionally, the Title III pollutants continue to be subject to any other applicable State and Federal rules; the exclusion is only for Part C rules.

Finally, section 112(q) retains existing NESHAPS regulations by specifying that any standard under section 112 in effect prior to the date of enactment of the 1990 Amendments shall remain in force and effect after such date unless modified as provided in the amended section. Therefore, the requirements of 40 CFR 61.05 to 61.08, including preconstruction permitting requirements, for new and modified sources subject to existing NESHAPS regulations are still applicable.

In summary, the pollutants currently regulated under the Act as of March 1991 that are still subject to Federal PSD review and permitting requirements are:

- carbon monoxide
- nitrogen oxides
- sulfur dioxide
- particulate matter and PM-10
- ozone (volatile organic compounds)
- lead (elemental)
- fluorides
- sulfuric acid mist
- total reduced sulfur compounds (including H_2S)
- CFC's 11, 12, 112, 114, 115

- halons 1211, 1301, 2402
- municipal waste combustor (MWC) acid gases, MWC metals and MWC organics.

2. Hazardous Air Pollutants that are Regulated as One Component of a More General Pollutant Under Other Provisions of the Clean Air Act are Still Regulated

Any hazardous air pollutants listed in section 112(b)(1) which are regulated as constituents of a more general pollutant listed under section 108 of the Act are still subject to PSD as part of the more general pollutant, despite the exemption in Title III. For example, volatile organic compounds (VOC's) (a term which includes benzene, vinyl chloride, methanol, toluene, methyl ethyl ketone, and thousands of other compounds) are still regulated as VOC's (but not as individual pollutants such as benzene, etc.) under the PSD regulations because these pollutants are ozone precursors, not because they are air toxics. Also, particulates (including lead compounds and asbestos) are still regulated as particulates (both PM-10 and particulate matter) under the PSD regulations. Lead compounds are exempt from Federal PSD by Title III, but the elemental lead portion of lead compounds (as tested for in 40 CFR Part 60, Appendix A, Method 12) is still considered a criteria pollutant subject to the lead NAAQS and still regulated under PSD.

3. Toxic Effect of Unregulated Pollutants Still Considered in BACT Analysis

Based on the remand decision on June 3, 1986 by the EPA Administrator in North County Resource Recovery Associates (PSD Appeal No. 85-2), the impact on emissions of other pollutants, including unregulated pollutants, must be taken into account in determining BACT for a regulated pollutant. When evaluating control technologies and their associated emissions limits, combustion practices, and related permit terms and conditions in a BACT proposal, the applicant must consider the environmental impacts of all pollutants not regulated by PSD. Once a project is subject to BACT due to the emission of nonexempted pollutants, the BACT analysis should therefore consider all pollutants, including Title III hazardous air pollutants previously subject to PSD, in determining which control strategy is best.

PSD Class I Boundary Issues

1. PSD Applicability Coverage Changes as Class I Area Boundaries Change

Sections 162(a) and 164(a) of the amended Act specify that the boundaries of areas designated as Class I must now conform to all boundary changes at such parks and wilderness areas made since August 7, 1977 and any changes that may occur in the future. The EPA does not believe that Congress intended to create the turmoil which would occur if this redesignation required the modification of permits issued between August 7, 1977 and November 15, 1990, or the resubmission and reevaluation of complete permit applications submitted prior to enactment of the 1990 Amendments. Thus, for this reason, applications considered complete prior to November 15, 1990 should be processed as submitted without regard to the new Class I area boundaries. Exceptions to this general policy are in the areas of increment consumption and air quality related values (including visibility), as discussed below.

For an applicant who submitted a complete PSD application prior to November 15, 1990, if all other PSD requirements are met, a permit may be issued based on the Class I analysis as submitted in the application, unless the reviewing authority finds, on a case-by-case basis, that additional analysis is needed from the applicant to address suspected adverse impacts or increment consumption problems due to the expanded boundaries of the Class I areas. Any existing increment violations in the new boundaries of Class I areas must be remedied through a SIP revision pursuant to 40 CFR 51.166(a)(3).

The PSD applications not considered complete before November 15, 1990 must consider the impact of both existing sources and the new or modified source on the Class I areas as defined by the 1990 Amendments. Thus, the complete application must consider the impacts on the entire Class I area based upon the boundaries in existence on the date of submittal of a complete application; as before, if a Class I boundary changes before the permit is issued, the reviewing authority may find, on a case-by-case basis, that additional analysis is needed from the applicant to address suspected adverse impacts or increment consumption problems due to expanded Class I area boundaries.

NSR Nonattainment Issues

1. NSR Construction Permit Requirements in Nonattainment Areas

In many States, the existing approved Part D permit program by its terms covers all designated nonattainment areas in the State, so a Part D permit program will automatically apply to the new and expanded nonattainment areas which are established under provisions of Title I of the 1990 Amendments. Thus, until new rules are adopted for these new or expanded nonattainment areas, States should apply the requirements of their existing approved Part D permit program. However, in other States, a Part D program may be limited to specified areas and does not apply to new or expanded areas. In these areas, States must implement a transitional permitting program until their existing Part D programs are revised to meet the requirements of the 1990 Amendments and expanded to cover all nonattainment areas in the State. Otherwise, both the goals of Part D and Congress' intent in creating new or expanded nonattainment areas will be frustrated.

The EPA regulations already provide for these new or expanded designated nonattainment areas because the Emission Offset Interpretative Ruling (40 CFR Part 51, Appendix S) governs permits to construct between the date of designation and the date an approved Part D plan is made applicable to the new nonattainment area [see 40 CFR 52.24(k)]. Until a State's new Part D plan is approved by EPA, if a State wishes to issue a permit for a major stationary source or major modification in a new or expanded designated nonattainment area, the State should comply with the requirements of Appendix S. Among other things, Appendix S requires a major source seeking to locate in a nonattainment area to (1) meet the lowest achievable emission rate for such source, (2) provide offsets from existing sources in the area, and (3) show that the offsets will provide a positive net air quality benefit (see 40 CFR Part 51, Appendix S, section IV.A). The EPA believes that in order to carry out the intent of Appendix S, offsets should be required for sources in all categories and in all instances should be calculated on a tons per year basis (see 40 CFR Part 51, Appendix S, section IV.C).

Of course, neither Appendix S nor the existing NSR rules incorporate the NSR changes mandated by Title I of the 1990 Amendments such as lower source applicability thresholds, increased emissions offset ratios, new definitions of major stationary source, and (for ozone nonattainment areas) requirements for nitrogen oxides (NOx)

control and NOx emissions offsets. However, the 1990 Amendments require States to submit to EPA new NSR permit program rules for ozone nonattainment areas by November 15, 1992; for PM-10 nonattainment areas by June 30, 1992; and for most carbon monoxide (CO) nonattainment areas no later than 3 years from the date of the nonattainment designation. The EPA interprets this as an expression of congressional intent not to mandate that States adhere to the more stringent Title I NSR requirements in nonattainment areas during the time provided for State implementation plan (SIP) development. Thus, for NSR permitting purposes in nonattainment areas, the new NSR requirements in Title I are not in effect until the States, as required by the Act, adopt NSR permit program rules to implement the Title I provisions. In addition, EPA encourages any State having adequate authority for early implementation of the NSR changes to do so as soon as possible.

If States fail to submit to EPA the new NSR permit program rules for nonattainment areas by the deadlines in the amended Act, EPA intends to impose in these nonattainment areas a Federal implementation plan (FIP) embodying such requirements. Currently, EPA intends to propose revised NSR regulations at 40 CFR Part 52 that would implement the new Title I NSR requirements under a FIP in a State if that State's revised NSR rules to implement Title I are not submitted in approvable form to EPA and made effective within the State by the deadlines established by the 1990 Amendments.

The area designation in effect on the date of <u>permit issuance</u> by the reviewing agency determines which regulations (Part C or Part D) apply to that permit. In other words, the PSD permit regulations apply to pollutants for which the area is designated as attainment or unclassifiable, and the NSR nonattainment permit regulations apply to pollutants for which the area is designated nonattainment [see 40 CFR 51.166(i)(3) and (5); and 40 CFR 52.21(i)(3) and (5)]. Under these regulations, a PSD permit for a pollutant cannot be issued in an area that is designated nonattainment for that pollutant. For the situation where a source receives a PSD or other permit prior to the date the area is designated as nonattainment, the permit remains in effect as long as the source commences construction within 18 months after the date of nonattainment designation of the area, does not discontinue construction for more than 18 months, and completes construction within a reasonable time [see 40 CFR 52.24(g) and (k)]. Although the PSD regulations provide for extension of these deadlines, no extension would be appropriate where the area has been designated as nonattainment following permit issuance. Accordingly, if

any of these construction provisions are not met, the PSD permit or other permit will not be extended, and the source (if subject to the nonattainment provisions) must obtain a nonattainment permit prior to commencing (or continuing) construction.

The 1990 Amendments create some new and expanded nonattainment areas by operation of law. Other nonattainment area changes are expected as the States and EPA complete the designation process prescribed in amended section 107(d). Because of these provisions, the dates areas switch from attainment to nonattainment for NSR purposes vary by pollutant. However, except for the two instances where the Amendments create changes by operation of law, the new designations and expanded boundaries will not be effective for NSR purposes until EPA promulgates the changes. The promulgations will be announced in the Federal Register.

Congress create new PM-10 nonattainment areas through designations that became effective upon enactment of the 1990 Amendments on November 15, 1990 [see section 107(d)(4)(B)]. Specifically, Congress designated Group I areas and areas where violations of the PM-10 NAAQS had occurred prior to January 1, 1989 as nonattainment. The EPA published a list of these PM-10 areas in a Federal Register notice (see 55 FR 45799, October 31, 1990; see also 52 FR 29383, August 7, 1987). The EPA plans to publish a notice in the Federal Register listing these areas as nonattainment in the near future, but they are already considered nonattainment areas as of November 15, 1990.

Similarly, the 1990 Amendments expand by operation of law some CO and ozone nonattainment areas. However, these changes did not become effective with passage but rather on December 30, 1990. The specifics are as follows:

> Section 107(d)(4)(A)(iv) of the amended Act provides that, with the exception explained below, ozone and CO nonattainment areas located within metropolitan statistical areas (MSA) and consolidated metropolitan statistical areas (CMSA) which are classified as serious, severe, or extreme for ozone or as serious for CO are automatically expanded to include the entire MSA or CMSA. This expansion became effective by operation of law 45 days after enactment unless the Governor submitted a notice by this deadline of the State's intent to seek a modification of the expanded boundaries pursuant to the procedures set forth in section 107(d)(4)(A)(v). So if a

State did not provide this notice, the nonattainment boundaries of all serious, severe, and extreme ozone nonattainment areas in the State and all serious CO areas in the State expanded to include the entire MSA or CMSA on December 30, 1990. If a State did provide timely notice, the Administrator has up to 14 months from enactment to resolve the State's challenge. Until EPA promulgates a resolution of the State's challenge, the old boundaries remain in effect.

Except for these two cases where new or expanded boundaries have been created by operation of law, nonattainment area changes will not be considered effective until the changes are promulgated by the EPA. As to most new areas or expansions of previously-designated nonattainment areas, this will occur 240 days after enactment [see section 107(d)(4)(A)(i) and (ii)]. Newly-created ozone and CO nonattainment areas will be considered part of a designated nonattainment area for NSR purposes at the time of promulgation.

2. Status of Construction Bans

Pursuant to section 110(n)(3), an existing construction ban that was imposed due to the absence of approved Part D NSR rules remains in effect until a revised NSR SIP is approved. Existing construction bans imposed due to disapproval of primary sulfur dioxide NAAQS attainment plans also remain in effect. A Federal Register notice will be published soon announcing the status of construction bans in general and also lifting specific bans where appropriate. Should a construction ban be lifted in any area designated as nonattainment, and the area lacks an approved Part D NSR rule, the State should meet the requirements of 40 CFR Part 51, Appendix S, in issuing permits to major new sources or major modifications prior to the adoption of NSR rules meeting the requirements of the 1990 Amendments.

3. Federal Implementation Plans Remain in Effect

The NSR permitting program in an existing FIP remains in effect until a SIP is approved or a revised FIP is adopted.

4. Use of Previously-Approved Growth Allowances is Prohibited

Section 172(b) invalidates growth allowances in existing SIP's in areas that received a SIP call prior to enactment of the 1990 Amendments, or that receive one thereafter. For NSR permits issued on or after November 15, 1990, previously-approved growth allowances cannot be used

in these areas. Construction permits cannot be issued in SIP-call areas under existing EPA-approved Part D programs to the extent that such permits rely on previously-approved growth allowances. Case-by-case emission offsets must be obtained for any such permits, and other existing Part D requirements must be met.

5. Existing NSR Permitting Rules Continue to Apply in the Northeast Ozone Transport Region (NOTR)

The 1990 Amendments establish a single ozone transport region comprised of the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the CMSA that includes the District of Columbia and part of the State of Virginia. For this transport region, including all attainment areas within its boundaries, new section 184(b)(2) specifies that any stationary source that emits or has the potential to emit at least 50 tons per year of VOC's shall be considered a major stationary source and subject to the requirements which would be applicable to major stationary sources if the area were classified as a moderate ozone nonattainment area. For NSR purposes, the requirements of section 184(b)(2) are not in effect in a State until the State submits a new or revised SIP that includes the requirements (or EPA imposes a FIP implementing those requirements). A State in the NOTR has until November 15, 1992 to submit to EPA the new or revised NSR rules addressing the new requirements.

Guidance for State Ozone/CO Submittals under the Clean Air Act Amendments of 1990

	Date Available
Guidance applicable to all areas	
Designating and classifying areas	
Designating and classifying nonattainment areas: OAQPS/EPA memorandum to Regional Offices on steps in process and preliminary data review	Nov-90
Getting started on the Title I requirements (an overview of early state submittal requirements)	Mar-91
Procedures and criteria for redesignating to attainment, including maintenance plan requirements	Nov-91
Enforcement/Compliance	
Review of State implementation plans and revisions for enforceability and legal sufficiency	Sep-87
Developing emission inventories	
Compilation of air pollutant emission factors, volume I and supplements A, B, and C (AP-42) - Vol. I GPO stock #: 055-000-00251-7 - Supplement A stock #: 055-000-00265-7 - Supplement B stock #: 055-000-00278-9 - Supplement C stock #: 055-000-00369-6	Sep-85
Compilation of air pollutant emission factors, Vol. II, mobile sources, GPO stock #: 055-000-00252-5 or NTIS stock # PB87-2-5266	
Procedures for emission inventory preparation: mobile sources (EPA-450/4-81-026d) (revised version to be completed in May 91)	Jul-89
AIRS facility subsystem source classification codes (SCCs) and emission factor listing for criteria pollutants (EPA-450/4-90-003)	Mar-90
SIP air pollutant inventory management system (SAMS) version 4.0 and SAMS user's manual	Mar-91
Preparing emission inventory projections	Jul-91
Modeling analyses	
Guideline on air quality models (revised 1987 and including the 1988 supplement) (EPA-450/2-78-027R)	Jul-88

Conformity	
Reconciliation of population projections in revised State implementation plans (to be incorporated into "Preparing emission inventory projections" due out Jul-91)	Jan-80
Survey of population projections used in air and water quality planning (to be incorporated into "Preparing emission inventory projections")	Jan-80
Incorporating 1990 census figures in CAAA Title I planning	
Criteria to ensure conformity with State implementation plans (SIPs)	Nov-91
Permit programs for stationary sources	
NSR prevention of significant deterioration and nonattainment area guidance notebook	Jan-88
NSR permitting guidance for newly-identified nonattainment areas	Jan-91
Proposed regulatory requirements for approvable State operating permit programs (Title V)	Apr-91
Proposed NSR/PSD rule implementing Clean Air Act related changes	Jun-91
Small business stationary source technical and environmental compliance assistance program (Title V guidance to assist States in implementing their small business assistance programs)	Aug-91
Model permits for VOC sources	Oct-91
Final regulatory requirements for State operating permit programs (for Title V)	Nov-91
Proposed procedures for Federal issuance of Title V operating permits, including Phase I acid rain requirements	Nov-91
Final procedures for Federal issuance of Title V including Phase I acid rain requirements	May-92
Final NSR/PSD rule changes which implement CAAA related changes	May-92
NSR/PSD Guidance Documents	
Draft NSR workshop manual dtd. October 1990	Dec-90
NSR/PSD construction permit transitional guidance	Jan-91
Tracking program progress and effectiveness	
Protocols for evaluating rule effectiveness (EPA memorandum from John Seitz to Regional Offices); future updates to be provided based on national studies	Mar-88

RFP Tracking for Ozone and CO	Nov-91
Requirements and guidance for areas that miss a milestone (i.e., guidance on election of options, including economic incentive program)	Nov-94
Miscellaneous	
Guidelines for the review of State implementation plan (SIP) revisions by EPA Regional Offices (EPA-450/2-89-005)	Feb-89
SIP completeness criteria, Title 40 Code of Federal Regulations, Part 51.103 (to be revised Sep 91)	Feb-90
Guidance for inclusion of Indian tribal air quality programs under the CAAA	May-92
Regulation implementing Sec. 107 tribal treatment as a State	May-92
Guidance applicable to ozone and CO areas	
Developing emission inventories	
Emission inventory requirements for ozone State implementation plans (EPA-450/4-91-010)	Mar-91
Procedures for the preparation of emission inventories for precursors of ozone, volume 1 (EPA-450/4-88-021)	Dec-88
Emission inventory requirements for carbon monoxide State implementation plans (EPA-450/4-91-011)	Mar-91
Guidance for the preparation of quality assurance plans for ozone/CO SIP emission inventories (EPA-450/4-88-023)	Dec-88
User's guide to MOBILE4 (mobile source emission factor model (EPA-AA-TEB-89-01) (to be revised with MOBILE 4.1)	Feb-89
Quality assurance program for post-1987 ozone and carbon monoxide State implementation plan emission inventories (EPA-450/4-89-004)	Mar-89
Procedures for estimating and applying rule effectiveness in post-1987 base year emission inventories for ozone and carbon monoxide State implementation plans	Jun-89
Example emission inventory documentation for post-1987 ozone State implementation plans (SIP's) (EPA-450/4-89-018)	Oct-89
Correspondence stating how to begin post-CAAA inventory activities requirements for inventory preparation and procedures for updating 1987/88 inventories to "year of enactment inventories" implementation plan (SIP base year emission inventories [draft])	Jan-91

Guidance for initiating ozone/CO SIP emission inventories pursuant to the 1990 Clean Air Act Amendments	Feb-91
VMT projection guidance	Apr-91
Preparing emission inventories for the urban airshed model (UAM)	May-91
Revised guidance for the preparation of emission inventories for carbon monoxide and precursors of ozone	May-91
Revised guidance for mobile service emission inventories including vehicle miles travelled	May-91
Form and content of emission states for ozone State implementation plans	May-91
Modeling analyses	
Guidelines for use of city-specific EKMA in preparing post-1987 ozone SIPs	Nov-87
User's manual for exercising OZIPM4 in post-1987 ozone SIP's (ozone isopleth plotting with optional mechanisms/version 4: volumes I (manual) and II (computer code)	Nov-87
User's manual for OZIPM4 (PC version) and addendum (EPA-450/4-88-016)	Nov-88
Consideration of transported ozone and precursors and their use in EKMA (EPA-450/4-89-010)[used in determining rural transport areas](to be revised May 91)	Jul-89
User's guide for the urban airshed model (UAM): volume I - user's manual for UAM (CB-IV) (EPA-450/4-90-007A)	Jun-90
User's guide for the urban airshed model (UAM): volume II - user's manual for UAM (CB-IV) modeling system (EPA-450/4-90-007B)	Jun-90
User's guide for the urban airshed model (UAM): volume III - user's manual for the diagnostic wind model (EPA-450/4-90-007C)	Jun-90
User's guide for the urban airshed model (UAM): volume IV - user's manual for the emissions preprocessor system (EPA-450/4-90-007D)	Jun-90
User's guide for the urban airshed model (UAM): volume V - description and operation of the ROM-UAM interface program system (EPA-450/4-90-007E)	Jun-90
Urban airshed model (UAM) applications guidance	May-91
UAM applications guidance in determining source contributions to other ozone nonattainment areas in regional transport areas	May-91
Determining stationary source contribution to CO nonattainment problems	May-91

Determination of conditions under which NOx controls are not required	Aug-91
Development of State implementation plans and demonstrations for multi-State ozone nonattainment areas	Aug-91
Substitution of NOx emission reductions for VOC reductions	Nov-91
Determining and calculating emission reductions needed to ensure reasonable further progress (15% reduction of VOC emissions within 6 years in moderate ozone areas plus 3% annual reductions beginning 6 years after enactment in serious areas) and demonstration of attainment (specific annual reductions in VOC and NOx emissions to attain NAAQS)	Nov-91
Enhanced ambient air quality monitoring program for serious, severe, & extreme ozone areas	May-92
Ozone transport regions	
Procedures for the establishment of ozone transport regions	Jul-91
Procedures and criteria for enlarging or reducing the size of transport regions (including procedures for public participation regarding petitions to add or subtract areas from the transport region)	Jul-91
Guidance regarding substitute measures for Stage II in ozone transport regions (available after EPA study of comparable measures)	Jan-94
Control measures	
Design criteria for Stage I vapor control systems at gasoline service stations	Nov-75
Control technique guideline (CTG) for surface coating operations: Volume I - General control methods (EPA-450/2-76-028)	Nov-76
Control technique guideline (CTG) for surface coating operations: Volume II - Surface coating of cans, coils, paper, fabrics, automobiles, and light-duty trucks (EPA-450/2-77-008)	May-77
Control technique guideline (CTG) for control of VOC emissions from tank truck gasoline loading terminals (EPA-450/2-77-026)	Oct-77
Control technique guideline (CTG) for control of petroleum refinery vacuum producing systems, wastewater separators & process unit turnarounds (EPA-450/2-77-025)	Oct-77
Control technique guideline (CTG) for control of VOC emissions from solvent metal cleaning (EPA-450/2-77-022)	Nov-77

Control technique guideline (CTG) for surface coating operations: Volume III - Surface coating of metal furniture (EPA-450-2-77-032)	Dec-77
Control technique guideline (CTG) for surface coating operations: Volume IV - Surface coating of magnet wire (EPA-450/2-77-033)	Dec-77
Control technique guideline (CTG) for surface coating operations: Volume V - Surface coating of large appliances (EPA-450/2-77-034)	Dec-77
Control technique guideline (CTG) for storage of petroleum liquids in fixed-roof tanks (EPA-450/2-77-036)	Dec-77
Control technique guideline (CTG) for control of VOC emissions from tank truck gasoline loading bulk plants (EPA-450/2-77-035)	Dec-77
Control technique guideline (CTG) for control of VOC emissions from cutback asphalt (EPA-450/2-77-037)	Dec-77
Control technique guideline (CTG) for control of fugitive VOC emissions from petroleum refining (EPA-450/2-78-036)	Jun-78
Control technique guideline (CTG) for surface coating of miscellaneous metal parts and products (EPA-450/2-78-015)	Jun-78
Control technique guideline (CTG) for factory surface coating of flatwood paneling (EPA-450/2-78-032)	Jun-78
Control technique guideline (CTG) for pharmaceutical manufacture (EPA-450/2-78-029)	Dec-78
Control technique guideline (CTG) for rubber tire manufacture (EPA-450/2-78-030)	Dec-78
Control technique guideline (CTG) for graphic arts rotogravure & flexography (EPA-450/2-78-033)	Dec-78
Control technique guideline (CTG) for petroleum liquid storage, floating roof tank (EPA-450/2-78-047)	Dec-78
Control technique guideline (CTG) for dry cleaning: perchloroethylene (EPA-450/2-78-047)	Dec-78
Control technique guideline (CTG) for gasoline tank trucks (EPA-450/2-78-051)	Dec-78
Control technique guideline (CTG) for large petroleum dry cleaners (EPA-450/3-82-009)	Sep-82
Control technique guideline (CTG) for manufacture of high density polyethylene, polypropylene, and polystyrene resins (EPA-450/3-83-008)	Nov-82
Control technique guideline (CTG) for natural gas/gasoline processing plants(EPA-450/3-83-007)	Dec-83

Control technique guideline (CTG) for control of fugitive emissions from synthetic organic chemical manufacturing industry (SOCMI) (EPA-450/3-83-006)	Dec-83
Control technique guideline (CTG) for control of SOCMI air oxidation processes (EPA-450/3-84-01)	Dec-83
Control technique guideline (CTG) for control of volatile organic liquids (VOL) storage vessels	Dec-83
Issues relating to VOC regulation cutpoints, deficiencies, and deviations: clarification to Appendix D of November 24, 1987 Federal Register (Blue book, revised 1/11/90)	May-88
Guidance on determining credits in oxygenated fuels programs	Aug-91
Background information on control of effectiveness of Stage II vapor recovery systems	Nov-91
Implementation of future control measures- a guidance document presenting the criteria for the structure of rules (i.e., appropriate recordkeeping, test methods, etc.) for future measures such as RACT rules, etc.	Nov-91
Revised guidance on motor vehicle inspection and maintenance (I/M) programs, including guidance on enhanced I/M	Nov-91
Evaluation, development, and implementation of transportation control measures	Nov-91
Contingency measures (general guidance and specific guidance for ozone and CO areas)	Nov-91
Evaluating cost effectiveness of control measures	Nov-91
Development and implementation of control measures to offset growth in emissions from growth in vehicle miles travelled (VMT): guidance for serious ozone and CO areas	Nov-91
Transportation control measure (TCM) guidance documents	Nov-91
Clean fuel fleet programs for serious ozone areas with populations > 250,000	Nov-92
Rules for economic incentive program	Nov-92
Federal rule for marine vessel loading standard (implications for State regulations for this source category)	Nov-92
Use of new technologies in extreme ozone areas	May-93
Report to Congress on consumer and commercial products	Nov-93

Guidance on Alternative Control Techniques (ACTs) for VOC and NOx sources emitting over 25 tpy	Nov-93
Control Technique Guidelines (CTG's) for 11 categories to be provided within three years after enactment	Nov-93
Control Technique Guideline (CTG) for aerospace coating and shipbuilding and repairing industries	Nov-93
VMT demonstration in serious+ ozone areas (to show consistency of projections and actual levels)	Dec-94
Products beginning in 1995	
First promulgation of federal regulations or guidance on control of emissions from use of consumer/commercial products (three more categories to be promulgated bi-annually thereafter)	Nov-95
Miscellaneous	
Procedures and requirements implementing NEPA for the Municipal Wastewater Treatment Construction Grants Program, 40 CFR Part 6.303	Sep-86
Transportation control measures: State implementation plan guidance	Sep-90
Update of the June 6, 1978 Transportation Air Quality Guidelines	Aug-91
State and local planning procedures	Aug-91
Guidance on consultation in the development of State implementation plans	Nov-91