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Federal Register, Vol. 46, No. 14, 7182-7192, 1/22/1981, "State Implementation Plans; Approval of 1982 Ozone and Carbon Monoxide Plan Revisions for Areas Needing an Attainment Date Extension."

Summary: Provision of the 1977 Clean Air Act Amendments require states that have received an extension of the attainment date for a national ambient air quality standard (NAAQS) for ozone or carbon monoxide beyond 1982 to submit a state implementation plan (SIP) revision by July 1, 1982. This policy describes the criteria that the Environmental Protection Agency (EPA) will use to review these 1982 SIP submittals and also updates and supplements the Administrator's February 24, 1978 memorandum, "Criteria for Approval of 1979 SIP Revision," (43 FR 21673) and subsequent guidance.

EPA proposed this policy on September 30, 1980 (45 FR 64855) and announced a 60-day period for public comment. The comments received on major issues, EPA's response to the comments, and the changes to the proposed policy are summarized below. A more detailed summary of comments and the EPA responses have been included in Docket No. A-79-43 and are also available for review at EPA regional offices.

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 51**

[A-FRL 1722-8]

State Implementation Plans; Approval of 1982 Ozone and Carbon Monoxide Plan Revisions for Areas Needing an Attainment Date Extension**AGENCY:** Environmental Protection Agency.**ACTION:** Final policy.

SUMMARY: Provisions of the 1977 Clean Air Act Amendments require states that have received an extension of the attainment date for a national ambient air quality standard (NAAQS) for ozone or carbon monoxide beyond 1982 to submit a state implementation plan (SIP) revision by July 1, 1982. This policy describes the criteria that the Environmental Protection Agency (EPA) will use to review these 1982 SIP submittals and also updates and supplements the Administrator's February 24, 1978 memorandum, "Criteria for Approval of 1979 SIP Revisions," (43 FR 21673) and subsequent guidance.

EPA proposed this policy on September 30, 1980 (45 FR 64855) and announced a 60-day period for public comment. The comments received on major issues, EPA's response to the comments, and the changes to the proposed policy are summarized below. A more detailed summary of comments and the EPA responses have been included in Docket No. A-79-43 and are also available for review at EPA regional offices.

DATES: Final policy effective January 22, 1981.

ADDRESS: Docket No. A-79-43, containing material relevant to this action, is located at the EPA Central Docket Section, West Tower Lobby, Gallery 1, 401 M Street, SW., Washington, D.C. 20460. The docket may be inspected between 8:00 a.m. and 4:00 p.m. on weekdays and a reasonable fee may be charged for copying. A summary of the comments received on the proposed policy and EPA responses to the comments are also available for review at the EPA regional office locations listed in Appendix E.

FOR FURTHER INFORMATION CONTACT: Additional information about the policy is available from the following: General policy contact: Mr. Johnnie L. Pearson, Standards Implementation Branch, Environmental Protection Agency (MD-15), Research Triangle Park, North

Carolina 27711, telephone (919) 541-5497.

Transportation policy contact: Mr. Gary C. Hawthorn, Office of Transportation and Land Use Policy (ANR-445), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, telephone (202) 755-0603.

Vehicle inspection and maintenance contact: Mr. Donald White, Motor Vehicle Emission Test Lab, Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan 48105, telephone (313) 688-4350.

SUPPLEMENTARY INFORMATION: During the 60-day comment period for the proposed policy EPA received comments from 28 organizations and individuals. Comments from over 30 other organizations and individuals were received after the close of the comment period. EPA carefully considered all the comments and made several changes to the policy. Major issues raised by those submitting comments, EPA's responses, and any resultant changes in the policy are summarized below. A more detailed summary of comments and EPA responses are included in Docket No. A-79-43 and available at EPA regional offices.

Attaining NAAQs After 1987

In the proposed policy EPA recognized that a few large urban areas with very severe ozone and carbon monoxide problems may not be able to attain NAAQs by December 31, 1987, the deadline set in the Clean Air Act. EPA proposed that such areas should submit SIP revisions by July 1, 1982 that demonstrate attainment as soon as possible after 1987 using additional, more effective measures beyond those required in other areas.

Some public and private organizations commenting on this portion of the proposal supported the course of action outlined by EPA. Others believed, however, that such a policy would encourage some areas to slow or abandon their air quality clean-up efforts. For example, one state environmental agency commented that granting any delay was inappropriate as federal policy and that asking the public to accept additional years of poor air quality was unacceptable. Several state and local agencies stated they believed that the EPA Administrator would be exceeding his authority under the Clean Air Act if he accepted a SIP that did not demonstrate attainment by 1987.

The final EPA policy still permits the submission from a few urban areas with severe ozone and carbon monoxide problems of SIPs that provide for expeditious attainment of NAAQs by a

specific date after 1987. The policy now makes more explicit, however, EPA's intent to carefully evaluate the effectiveness of measures in SIPs for all area and ensure that the most effective measures have been adequately considered in any area that does not demonstrate attainment by 1987.

EPA recognized in the proposal that current provisions of the Clean Air Act may not allow approval of a SIP that provides for attainment of NAAQs after 1987 and that action by the Congress may be necessary. EPA considers any request to the Congress for additional delay of attainment deadlines to be a serious step and one that should be considered only after it is clear that all available and implementable control measures will be adopted.

Providing Adequate Time for SIP Adoption

The proposed policy reiterated and expanded upon the Clean Air Act requirements that a fully adopted, legally enforceable SIP revision must be submitted to EPA by July 1, 1982. Several state and local agencies responsible for SIP development commented that they would be unable to ensure the adoption and submittal of all required measures by July 1982, particularly if EPA guidance mentioned in the proposed policy is not available early in 1981. EPA recognizes that meeting the July deadline may be a problem for some areas, but is constrained by the Clean Air Act from granting any time extensions.

EPA will continue the practice of granting conditional SIP approval followed in acting on the plan revisions due in 1979. If a SIP revision is in substantial compliance with Part D of the Clean Air Act and the state provides assurances that remaining minor deficiencies will be remedied within a short time, EPA may approve the plan with conditions that corrective actions will be completed according to a specified schedule. For example, if missing regulations applying RACT to required sources constitutes a minor deficiency in the SIP and the state commits to a schedule for submitting those regulations, then EPA may conditionally approve the SIP.

The proposed policy included the requirement that states must adopt regulations applying reasonably available control technology (RACT) to all sources of volatile organic compounds (VOCs) covered by a control technique guideline (CTG) and to all other major sources of VOCs. EPA also announced its intent to issue additional CTGs during 1981. A number of agencies

responsible for developing SIPS commented that they do not have sufficient resources to finalize regulations for both CTG and non-CTG source categories. Some of the agencies also indicated that the time necessary to satisfy state and local procedural requirements makes it unlikely that the required regulations will be fully adopted by July 1982. A state environmental agency, for example, stated that although the agency agrees in principle with the requirements for regulating both CTG and non-CTG source categories, the agency does not have adequate staff and financial resources to complete the necessary technical analysis and rulemaking activities. In addition, the requirements of the state administrative review process cannot be met by July 1982, even if rulemaking is limited only to CTG sources. A local environmental agency commented that it may not be possible to submit regulations for source categories covered by CTGs issued late in 1981. In order for the regulations to be included in the July 1982 submittal, the local agency must provide the regulations to the state by the end of 1981.

To help ensure that states have adequate opportunity to meet the July 1982 deadline, EPA will issue the new CTGs as early as possible in 1981. The CTGs are in preparation and will be available in draft form between January and May 1981. The final CTGs will be published between July and October 1981. If state and local agencies begin now to develop the necessary data and work with the draft CTGs, they should be able to complete development of regulations by July 1982.

Providing for the Implementation of I/M Programs

The proposed policy included the requirement that states submit, by July 1982, the rules and regulations for vehicle inspection and maintenance (I/M) programs, as well as documentation of 10 other critical I/M program elements. The proposed policy stated that EPA would update I/M guidance for determining I/M program adequacy.

Some state and local agencies commented that guidance not available for their use in planning and implementing I/M programs should not be used to evaluate the I/M portion of the 1982 SIP. Many of these agencies were concerned that updated guidance would include new requirements which could adversely affect I/M activities already in progress and which could not be completed by July 1, 1982. Other agencies commented that EPA should not evaluate individual elements of an I/M

program, but should evaluate the program as a whole; that the I/M guidance should be promulgated through rulemaking to allow review and comment by interested parties; and that the intent of requiring the I/M public awareness plan in the 1982 SIP is unclear.

A state agency also questioned whether additional emission reductions from other source categories could be used to offset any shortfall from I/M, rather than making the I/M program more stringent. That agency also questioned whether, in a state with a post-1978 attainment date and with legislative authority which needed to be changed before I/M effectiveness could be increased, commitments to obtain needed legislative changes were adequate for the 1982 SIP, rather than having the legislative changes themselves before July 1982.

EPA's basic requirements for I/M programs are included in a widely distributed July 17, 1978 policy memorandum. Subsequent clarifications to that policy have defined the factors involved in designing I/M program elements and provided information on designing programs which optimize technical and cost effectiveness. Additional information along these lines will be provided.

The July 17, 1978 policy memorandum will be the primary basis for determining I/M program adequacy in the 1982 SIP process. The final policy has been revised to reflect this. EPA agrees that the policy should contain provisions for those states that are meeting an approved schedule, but will not be able to make a complete I/M submission by July 1982. Appropriate changes have been incorporated into the final policy. EPA also agrees that the I/M program must be evaluated as a whole, rather than element by element.

EPA does not believe that I/M policy and guidance needs to be promulgated through rulemaking, but does agree that review and comment by interested parties are important. The appropriate place for rulemaking for I/M is the SIP review and approval process. EPA feels that the states and other interested parties have always been extensively involved in the policy and guidance development process. EPA will continue to seek such review and comment.

EPA feels that the I/M public awareness plan is critical for the successful implementation of an I/M program and that it must be included as part of the 1982 SIP. EPA recognizes, however, that much of the public awareness activity should generally have been completed before the 1982 SIP deadline and will work with the

states in developing and implementing their public awareness plans. Guidance is available on what should be included in a good public awareness plan.

If an I/M program fails to achieve the requisite emission reduction, then the program will have to be modified to obtain that reduction. Additional emission reductions from other source categories cannot be used to compensate for a shortfall from I/M.

Because section 172(c) of the Act requires all measures in the 1982 SIP to be legally enforceable, any further legislative authority will have to be obtained before the 1982 SIP is submitted. A commitment to obtain such authority will not be sufficient for the 1982 SIP.

Making Commitments to Implement Transportation Measures

The proposed policy required that the 1982 SIP submittal include commitments by state and local governments to implement the necessary transportation measures. The documentation of the commitment must include identification of costs, funding sources, and responsibilities of state and local agencies and officials. Several state and local agencies commenting on the proposal expressed concern about making commitments to transportation improvement projects that are only in the early stages of planning and have not been included in state and local budgets or been approved for federal funding.

The definition of implementation commitments contained in Appendix C has been expanded to clarify the form of the commitment for projects that are progressing towards implementation, but have not received budget approvals. Essentially, the implementation commitment for these projects or measures should be a schedule of the major steps required to advance the project through the planning and programming processes. This schedule should also contain an identification of the responsible agencies that must take significant actions to implement the measure. An illustration of such a schedule is also contained in Appendix C.

If a particular measure cannot be implemented because the necessary funds cannot be obtained from the funding source identified in the schedule and if the SIP planning agencies can demonstrate compliance with the provisions of the Clean Air Act requiring priority treatment for projects important for improved air quality and basic transportation needs, then the measure may justifiably be delayed. If this does occur, another substitute measure may

be needed for replacement to ensure that NAAQs are attained (see the section on contingency plans).

Developing Monitoring and Contingency Plans for Transportation Measures

The proposed policy included requirements for developing a monitoring plan for regularly assessing the effectiveness of transportation measures and a contingency plan for implementing additional transportation measures if forecasted emission reductions do not occur. A number of state and local governments commented that they do not have sufficient time and resources to develop monitoring and contingency plans at the same time that they are developing the measures to meet the emission reduction targets for transportation. Some of those commenting interpreted the monitoring requirements as being primarily for air quality monitoring.

In the final policy the monitoring plan requirements emphasize the use of methods that rely on surrogate measures and on data already being collected for other purposes. The monitoring plan need *not* include additional air quality monitoring.

The requirements for a contingency plan have been revised to require a listing only of transportation measures and projects that, because of their potentially adverse effect on air quality, will be delayed while a SIP is being revised. The projects will be delayed when the Administrator of EPA finds that a SIP is inadequate to attain ozone or carbon monoxide NAAQs and calls for a SIP revision under section 110(c) of the Clean Air Act. EPA has also adopted the suggestion of a local transportation planning agency and is requiring that the SIP include a description of the process to be used to develop and implement additional transportation control measures when they are determined necessary.

Establishing Emission Reduction Targets

The proposed policy required state and local officials to reach agreement on the emission reductions necessary to attain NAAQs, the extent to which the emission reductions will come from controls on mobile or stationary sources, and the responsibilities for implementation of the measures. Several comments were received noting the difficulties in determining emission reduction targets for meeting the ozone NAAQS because of the form of the standard, the characteristics of the Empirical Kinetic Modeling Approach (EKMA) model, and the effects of pollutant transport. Other comments reflected confusion about where in the

SIP development process the identification of targets would occur.

An August 1, 1978 EPA policy memorandum outlined the reasons for establishing emission reduction targets through a negotiated process involving state and local officials from affected jurisdictions. In the past, emission reduction targets and responsibilities for achieving the targets have sometimes been determined without adequate intergovernmental consultation. In some instances, for example, states attempted to require local agencies to make up large shortfalls in needed reductions entirely through transportation measures without examining whether other measures, such as more stringent emission limitations for stationary sources, might make up some of the shortfall.

The final policy has been revised to help clarify the intent of the section on emission reduction targets. The process for negotiating emission reduction targets becomes especially important in those areas where the minimum control measures described in subsections I.B-I.D are not sufficient to attain NAAQs and additional measures must be evaluated and selected. The subsection on analysis of alternatives has been revised to indicate that the results of the evaluation of alternatives should be used in defining emission reduction targets.

Demonstrating Reasonable Further Progress

The proposed policy included requirements for demonstrating reasonable further progress towards attaining NAAQs. A substantial number of comments were received objecting to the requirement for a "linear attainment program" represented graphically by a straight line from base year to attainment year emissions. Those commenting noted that many control measures, particularly those for vehicle emissions, have long lead times and do not have significant effects within the first few years after adoption. Those measures that are implemented within the early years will generally not result in a linear rate of emission reduction.

The final policy has been redrafted to clarify that the linear attainment program represents only the upper limit for annual net emissions from 1980 through the year of attainment. The measures encompassed by the linear attainment program include those in both the 1979 and 1982 submittals. Although there may be some lag time before the measures in the 1982 submittal result in emission reductions, reductions should already be occurring

as a result of measures in the 1979 submittal.

The final policy now also reiterates the reporting requirements included in the approval criteria for the 1979 submittal and asks that the annual reasonable further progress reports be combined with related information already being submitted on July 1 of each year.

Ensuring Conformity of Federal Actions

Section 176(c) of the Clean Air Act requires that federal actions conform to SIPs. The proposed policy indicated that states should, where possible, identify the emissions associated with federal actions planned during the period covered by the SIP. A number of comments received on that portion of the proposed policy requested clarification of the process for ensuring conformity and the respective responsibilities of federal, state, and local governments. The comments noted the potentially large number of actions involved, the associated work load for state and local governments, and the lack of available state and local resources. The comments also included questions about the methods to be used for determining conformity.

The final policy outlines the general responsibilities of federal, state, and local governments. Further clarification will be provided in a proposed rule that EPA intends to issue shortly. Section 176(c) states that the assurance of conformity of federal actions is the affirmative responsibility of the head of each federal agency. EPA believes that each federal agency should establish criteria and procedures for making conformity determinations and that state and local governments should have opportunity to review proposed criteria and procedures, as well as the individual conformity determinations that result from their application. The proposed rule that EPA is preparing encourages the use of existing review processes, such as those required by the National Environmental Policy Act and Office of Management and Budget Circular A-95, to reduce the resources required for ensuring conformity.

Interim criteria for use in making and reviewing conformity determinations are included in an advance notice of proposed rulemaking published by EPA on April 1, 1980 (45 FR 21590). Criteria and procedures for evaluating the direct and indirect air quality effects of wastewater treatment facilities funded under the Clean Water Act are included in the section 316 policy published on August 11, 1980 (45 FR 53382). Identification, during SIP preparation, of the emissions associated with future

major federal actions will facilitate state and local review of conformity determinations.

Consultation Among State and Local Officials

Two state environmental agencies commenting on the proposed policy thought that the consultation provisions were generally unclear. A local planning agency asked that the policy be supplemented to indicate that the designations of agency responsibilities made by governors prior to the 1979 plan submittals remain in effect. A public interest group requested that the policy forbid states from making unilateral changes in SIP provisions developed by local governments.

Modifications were made in the consultation provisions of the final policy to help clarify apparently ambiguous points and to indicate that new section 174 agency designations are not necessary. Although EPA agrees that a state should not revise a locally developed SIP provision without consulting local officials, EPA believes that the regulations for implementing section 121 of the Clean Air Act already adequately cover such a situation and provide opportunity for appeal to EPA if adequate consultation does not take place.

Determining Data and Modeling Requirements

The proposed policy required that emission inventories should, where possible, be prepared for a 1980 base year. The policy also required that base year and projected year emission inventories for the ozone portion of the SIP be seasonally adjusted annual inventories. The proposal required the SIP to be based on the most recent three years of air quality data, generally including data collected through the third quarter of 1981. The proposal recommended use of the city-specific EKMA model to develop the ozone portion of the SIP.

Several agencies responsible for developing emission inventories commented that agreements had been reached and work had already begun on inventories for base years other than 1980. The agencies recommended that EPA remain flexible in the final policy and accept inventories for those other base years. The final policy continues to allow inventories for base years other than 1980 to be used.

A number of state and local agencies questioned the validity of requiring seasonally adjusted annual inventories of VOCs. Most of those commenting recommended that the inventories be prepared for a typical summer weekday

instead. The final policy requires the weekday inventory.

Several agencies indicated in their comments that their normal processing time to validate air quality data would prevent them from using data through the third quarter of 1981, if the SIP was to be developed and submitted by July 1982. The final policy encourages the use of data through the third quarter of 1981, but allows states to use earlier data. If a state selects to use earlier data, it still must present a summary of air quality data through 1981 in its July 1982 submittal and describe how the data may affect the SIP.

State and local agencies that had applied photochemical dispersion models in their previous SIP development work commented that they should be allowed to use these models, rather than the less sophisticated city-specific EKMA model, in developing their 1982 submittals. The final policy encourages the use of the photochemical dispersion models where the agency developing the SIP has a demonstrated capability to use such models and wishes to do so. Use of a model other than city-specific EKMA or its equivalent must be approved by EPA.

Final Policy—Criteria for Approval of The 1982 Plan Revisions

Introduction

In circumstances where a state has received an extension beyond 1982 for attaining a NAAQS for ozone or carbon monoxide, the Clean Air Act Amendments of 1977 [Section 129(c) of Pub. L. 95-95] require the state to adopt and submit a SIP revision to the Administrator of EPA by July 1, 1982. The areas that are affected by this requirement are listed in Appendix A. The purpose of this notice is to outline the criteria that EPA will use in evaluating the adequacy of the 1982 SIP revisions. These criteria fall into four general categories: (1) Control strategies and attainment demonstration, (2) SIP development process, (3) data collection, and (4) modeling.

The Clean Air Act Amendments of 1977 require all SIPs for the areas that have received an extension beyond 1982 to demonstrate attainment of the NAAQSs for ozone and carbon monoxide as expeditiously as practicable, but not later than December 31, 1987. As a condition for extending the attainment date, Congress also required that each SIP contain certain control provisions covering stationary sources, vehicle I/M, and transportation measures. The control provisions must be included in the SIP for an area where an extension has been granted,

regardless of the date after December 31, 1982 when attainment can be demonstrated. These minimum measures and their relationship to the plan's attainment demonstration are described in Section I. Section I also discusses the approach that EPA believes should be followed by those few large urban areas where air quality problems are so severe that analyses may indicate that attainment by 1987 is not possible.

In addition to including a demonstration of attainment, the development of the 1982 SIP must conform to the process and follow the procedures required by the Clean Air Act and described in subsequent EPA guidance. Section II identifies the major steps in the SIP development process. Selected EPA guidance documents for the SIP process are listed in Appendix B. Terms used in the transportation-air quality process are defined in Appendix C. Also, the air quality and emissions data bases to be used in developing the 1982 SIP must be updated. The data requirements for both ozone and carbon monoxide are explained in Section III. The data base for the ozone portion of the SIP must be sufficient to support at least a Level III modeling analysis. The requirements for a Level III analysis are summarized in Appendix D.

Finally, Section IV describes the status of the various air quality models and alerts states to modeling requirements. EPA recommends application of city-specific EKMA or an equivalent method for developing the ozone portion of the SIP, unless the agency preparing the SIP already has the capability and wants to apply a more sophisticated level of modeling. For the carbon monoxide portion, EPA recommends application of the models identified in existing EPA guidance.

I. Control Strategies and Attainment Demonstration

A. Summary

The Clean Air Act requires the 1982 SIPs to contain a fully adopted, technically justified program that adopts and commits to implement groups of control measures that will result in attainment of the ozone and carbon monoxide NAAQSs no later than 1987 and that will provide reasonable further progress in the interim. All plans must contain the three categories of minimum control measures described in this section. If these minimum control measures are not adequate to show attainment by 1987, additional measures which can be implemented by 1987 must be identified and adopted. If all measures which can be implemented by

1987 are not adequate to demonstrate attainment by 1987, additional measures which can be implemented after 1987 must be identified and adopted and attainment must be demonstrated by the earliest possible date, the date of attainment must be specified in all SIPs. In order to ensure equity among the areas unable to demonstrate attainment by 1987, EPA intends to evaluate all SIPs submitted in July 1982 for the effectiveness of measures applied in all areas. Should EPA find that any of the areas not demonstrating attainment by 1987 have failed to adopt the most effective measures available, EPA will compile a list of such controls and require these areas to revise their SIPs to include the more effective control measures.

Subsections B-D describe in detail the minimum control measures which must be contained in each plan submitted in July 1982. The state must demonstrate that adoption and implementation of these elements will result in the attainment of the ozone and carbon monoxide standards by the most expeditious date possible. Control measures must be adopted in legally enforceable form. The SIP submittal must include implementation schedules and commitments. Subsections E and F describe reasonable further progress and attainment demonstration requirements. Subsection G describes the conformity of federal actions requirement.

B. Stationary Sources

Section 172(b) of the Clean Air Act requires states to implement all reasonably available control measures as expeditiously as practicable and, in the interim, maintain reasonable further progress, including such reduction in emissions from existing sources as may be obtained through the adoption, at a minimum, of RACT. In order to complete the requirement to adopt all reasonably available control measures, states must include as part of the 1982 submittal, adopted regulations applying RACT to the following categories of sources: (1) All sources of VOCs covered by a CTG, (2) all remaining major (emitting more than 100 tons per year potential emissions as defined under section 302(j) of the Clean Air Act) stationary sources of VOCs, and (3) all sources of carbon monoxide emitting more than 1,000 tons per year potential emissions.

The guidelines for the 1979 ozone submittals permitted states to defer the adoption of regulations until the CTG for a source category was published. This delay allowed the states to make more technically sound decisions regarding the application of RACT. EPA

anticipates issuing a number of additional CTGs in 1981 for various source categories of VOCs. These documents, in conjunction with the previously issued CTGs, will address most of the major source categories which are of national importance. Legally enforceable measures implementing RACT for all sources addressed by these documents must be included in the July 1982 submittal.

There will remain numerous other major sources of VOCs that may be of local importance for which a CTG will not be available. For the major sources for which a CTG does not apply, a state must determine whether additional controls representing RACT are available. EPA will require the submittal to include either legally enforceable measures implementing RACT on these sources or documentation supporting a determination by the state that the existing level of control represents RACT for each of these sources.

If application of RACT to all sources covered by a CTG and all other major sources, together with implementation of a vehicle I/M program and transportation controls, does not result in attainment of the ozone standards by 1987, then additional stationary source controls must be adopted by the state.

C. Vehicle Inspection and Maintenance

All major urban areas needing an extension beyond 1982 for attainment of a standard for ozone or carbon monoxide were required to include vehicle I/M as an element of the 1979 SIP revision. States were required at that time to submit only evidence of adequate legal authority, a commitment to implement and enforce a program that will reduce hydrocarbon and carbon monoxide exhaust emissions from light duty vehicles in 1987 by 25 percent, and a schedule for implementation. Full implementation of that program, in accordance with EPA's established I/M policy, is required in all cases by December 31, 1982.

States with areas that have I/M programs under development or operational as part of their 1979 SIP revisions were required to submit only qualitative descriptions of their I/M program elements in the 1979 SIP submittal. The documentation discussed below must be submitted by July 1982, if not previously submitted as evidence of compliance with the 1979 implementation schedule. The 1982 SIP revision must include rules and regulations and all other I/M elements which could affect the ability of the I/M program to achieve the minimum emission reduction requirements. More specifically, the 1982 submittal must

include: (1) Inspection test procedures; (2) emission standards; (3) inspection station licensing requirements; (4) emission analyzer specification and maintenance/calibration requirements; (5) recordkeeping and record submittal requirements; (6) quality control, audit, and surveillance procedures; (7) procedures to assure that noncomplying vehicles are not operated on the public roads; (8) any other official program rules, regulations, and procedures; (9) a public awareness plan; and (10) a mechanics training program if additional emission reduction credits are being claimed for mechanics training.

As part of the 1982 SIP review process, EPA will determine the overall adequacy of the critical elements of each I/M program and, therefore, the approvability of the 1982 SIP by comparing those elements to established I/M policy. I/M program elements must be consistent with EPA policy or a demonstration must be made that the program elements are equivalent.

State or local governments that have I/M programs, but plan to increase the coverage and/or stringency of the programs in order to achieve greater reductions, must submit the program modifications in legally enforceable form through the 1982 SIP revision process.

If a state wishes to submit all or part of the I/M elements required for the 1982 SIP revision before July 1982, with or without other portions of the 1982 SIP revision, EPA will review and evaluate the submittal and take appropriate action as expeditiously as practicable. In the case of a partial submittal, EPA's action will be limited to the available program elements. Final action on the total I/M program must be reserved until all elements are submitted and reviewed in order to assure that the program satisfies the provisions in Part D of the Clean Air Act.

If a state is implementing an I/M program on an approved schedule which extends beyond July 1, 1982, and the state is unable to finalize some of the critical elements of its I/M program in time to include them in the 1982 SIP revision, the state may submit those elements at a later date. This later date must, however, be identified and justified by the state in its 1982 SIP revision and be consistent with the I/M implementation schedule in its 1979 SIP submittal. In such cases EPA will review the available program elements and, if adequate, conditionally approve the I/M program on the submittal (by the designated date) and approval of the outstanding elements.

D. Transportation Measures

The portion of the 1982 SIP addressing emission reductions to be achieved through the implementation of transportation measures must include the basic provisions listed below.

Further guidance will be issued, as necessary, to describe these requirements in greater detail.

1. An updated emission reduction target for the transportation sector. As discussed below, the target must be determined by consultation among state and local officials using the procedures established under sections 121 and 174 of the Act.

2. All reasonably available transportation measures and packages of measures necessary for the expeditious attainment of the transportation emission reduction target. Categories of reasonably available transportation measures are identified in section 108(f) of the Act. The submittal should present documentation, based on technical analysis, of the basis for not implementing any of the measures identified in this section. The 1982 SIP submittal must contain transportation emission reduction estimates for adopted measures and packages of measures for each year between 1982 and the attainment date. Any reasonably available transportation measures that have been adopted between the submission of the 1979 revision and the preparation of the 1982 revision should be included in the 1982 submittal along with the associated emission reductions.

3. Commitments, schedules of key milestones, and, where appropriate, evidence of legal authority for implementation, operation, and enforcement of adopted reasonably available transportation measures. Costs and funding sources for planning, implementing, operating, and enforcing adopted measures must be determined for all measures. Tasks and responsibilities of state and local agencies and elected officials in carrying out required programming, implementation, operation, and enforcement activities associated with adopted transportation measures must be identified. The 1982 submittal must also include documentation that state and local governments are continuing to meet the schedules and commitments for the transportation measures included in the 1979 SIP.

4. Comprehensive public transportation measures to meet basic transportation needs. The measures must be accompanied by an identification and commitment to use, to the extent necessary, federal, state, and

local funds to implement the necessary improvements. Commitments and schedules for the implementation of these measures must also be submitted.

5. A description of public participation and elected official consultation activities during development of the transportation measures.

6. A monitoring plan for periodically assessing success or failure of transportation measures or packages of measures in meeting emission reduction projections. The plan should contain methods for determining the reasons for success or failure.

7. Administrative and technical procedures and agency responsibilities for ensuring, in response to section 176(c) of the Clean Air Act, that transportation plans, programs, and projects approved by a metropolitan planning organization (MPO) are in conformance with the SIP.

8. A two-part contingency provision. The first part is applicable to only those areas with populations of 200,000 or more. These areas must submit as part of the SIP a list of planned transportation measures and projects that may adversely affect air quality and that will be delayed, while the SIP is being revised, if expected emission reductions or air quality improvements do not occur. The second part, which must be submitted by all areas preparing 1982 SIP revisions, consists of a description of the process that will be used to determine and implement additional transportation measures beneficial to air quality that will compensate for the unanticipated shortfalls in emission reductions. The contingency provision must be initiated when the EPA Administrator determines that a SIP is inadequate to attain NAAQSs and that additional emission reductions are needed.

The Administrator's February 24, 1978 memorandum, "Criteria for Approval of 1979 SIP Revisions," and the October 1978 SIP Transportation Checklist identified the elements necessary for the transportation portion of the 1979 SIP. The provisions listed above supplement the elements described in the earlier guidance.

The guidance for 1979 placed primary emphasis on the establishments of a continuing air quality-transportation planning process. This continuing planning process must be used in developing the transportation portion of the 1982 SIP revision. The process is described in the June 1978 EPA-Department of Transportation (DOT) Transportation-Air Quality Planning Guidelines and the May 1, 1980 EPA-DOT Expanded Guidelines for Public Participation. Where the process for an

area has changed from that described in the 1979 submittal, an updated description, including key planning, programming, and funding decision points, should be submitted in 1982.

Solutions to carbon monoxide problems can be found through metropolitan-wide planning, as well as through analyses of relatively small ("hotspot") problem areas. Evidence of specific carbon monoxide problem areas is derived from modeling and monitoring information. Although the geographic area that is nonattainment for carbon monoxide may be small, the measures necessary to meet standards may have to be applied over a larger area. It is essential to guard against selecting measures that will solve the carbon monoxide problem in a small geographic area, but that will worsen the ozone problem or simply transfer the carbon monoxide problem to another area.

E. Reasonable Further Progress

The July 1982 submittal must demonstrate that reasonable further progress toward attainment of the ozone and carbon monoxide standards will continue to be made and reported throughout the period of nonattainment. The annual emission reductions must at least equal the emission reductions that would be achieved through a linear attainment program. As described in the criteria for approval of the 1979 SIP submittal, this program is represented graphically by a straight line drawn from the emissions inventory for the base year of the 1979 submittal to the allowable emissions on the attainment date. Compliance with the reasonable further progress requirement does not authorize delays in implementation or adoption of any measures. All controls must be implemented as expeditiously as practicable.

The demonstration of reasonable further progress must indicate the total amount of the annual reduction in emissions and must distinguish between those reductions projected to result from mobile source and stationary source measures. The projected reductions to be achieved from these source categories must be consistent with the emission reduction target established through the consultation process involving state and local officials.

The criteria for approval of the 1979 submittal recognized that there would be a lag in the early years in achieving reasonable further progress because most measures would not achieve immediate reductions. By 1982, however, a significant number of the stationary source controls and transportation measures included in the 1979 submittal will be implemented, as will the vehicle

emission I/M program. Emission reductions will also continue to result from the control systems required by the Federal Motor Vehicle Control Program for new vehicles. Accordingly, each plan must demonstrate for each year until attainment is achieved that the annual net emissions fall on or below the point representing that year on the straight line. No lag period will be allowed in 1982 and later years.

The criteria for approving the 1979 SIP submittals included a requirement for annual reporting of reasonable further progress. The information demonstrating reasonable further progress shall be submitted along with the source emissions and annual state action report required by July 1 of each year (40 CFR 51.321-51.328).

F. Additional Control Measures Required for Attainment

If the minimum control measures described in subsections B-D are not adequate to demonstrate attainment by 1987, the state must identify, evaluate, and adopt additional measures which can be implemented as quickly as possible, but no later than 1987. Examples of such measures include the following:

(1) Requiring control of all major stationary sources to levels more stringent than those generally regarded as RACT,

(2) Extending controls to stationary sources and source categories other than those subject to the minimum control measures described in subsection B,

(3) Implementing a broader range of transportation controls (e.g., extending the geographic coverage of some measures or providing more intensive implementation), and

(4) Increasing the coverage and stringency of the vehicle emission I/M program.

If implementation of all measures which can be implemented by 1987 will still not demonstrate attainment by 1987, the state should then analyze the transportation and other measures possible in a longer time frame that, together with the measures already evaluated, will result in attainment as quickly as possible after 1987. The specific date for attainment shall be included in the SIP. State and local governments must commit to implementation of such measures.

Given the additional time and potential resources available to areas with a post-1987 attainment date, more extensive evidence will be required to demonstrate that any of the measures identified in section 108(f) of the Clean Air Act is not reasonably available.

Many transportation measures which cannot be implemented by 1987 can, because of the additional time and resources available, be implemented by a post-1987 attainment date. The 108(f) measures ultimately selected should, both individually and collectively, be at least as ambitious as applications of these measures in other comparable areas. EPA, in consultation with the DOT, will act as a clearinghouse in identifying ambitious performance levels for specific measures.

The 1982 SIP revision to achieve a post-1987 emission reduction target must include a convincing demonstration that the target cannot be achieved by 1987 and that the post-1987 date is the most expeditious date possible. The demonstration must identify the minimum times needed for planning, programming, and implementation of adopted transportation and stationary source control measures and must demonstrate that all possible measures will be implemented prior to 1987. In addition, the demonstration must show that projected resources from available sources (federal, state, and local) are insufficient for faster implementation of the measures.

EPA will use the technical evaluation prepared by a state to assess whether areas are making all efforts possible to attain the ozone and carbon monoxide standards by 1987. If an area is unable to attain the ozone and carbon monoxide NAAQSs by 1987, then the "most expeditious date beyond 1987" must be agreed to by state and local agencies. The transportation and stationary source control measures necessary for demonstrating attainment by the most expeditious date must be adopted as part of the 1982 SIP submitted to EPA.

EPA believes that an approach which requires a state to demonstrate attainment by a certain date using measures it is committed to implement is more in keeping with the spirit of the Clean Air Act than an approach which would accept "paper" demonstrations of attainment by 1987 which relied on measures which would be virtually impossible to implement. EPA will not approve a plan which relies on such unimplementable measures to demonstrate attainment, when it is clear that the state is not committed to implement and enforce those aspects of the plan.

EPA will review plans with post-1987 attainment dates in accordance with the requirements of the Clean Air Act. If EPA concludes that the current provisions of the Act do not allow approval of a SIP that provides for expeditious attainment of standards

after 1987, EPA intends to seek legislative changes that will allow such an approval. The nature of any legislative change that the Agency may request will be based on a careful evaluation of the status of state efforts to develop plans which attain the standards on or before 1987. One option for legislative change that EPA will consider recommending would provide area-specific schedules and control requirements for each of the areas that cannot demonstrate attainment by 1987.

G. Conformity of Federal Actions

Section 176(c) of the Clean Air Act requires all federal projects, licenses, permits, financial assistance and other activities to conform to SIPs. Assurance of conformity is an affirmative responsibility of the head of each federal agency. In addition, section 316(b) requires that the direct and indirect emissions associated with any wastewater treatment facility funded under the Clean Water Act be accommodated in the SIP. In preparing the 1982 SIP revision, states and local governments should identify, to the extent possible, the direct and indirect emissions associated with major federal actions, including wastewater treatment facility grants, that will take place during the period covered by the SIP. Explicit identification of emissions will enable state and local governments to more quickly and easily evaluate subsequent federal conformity determinations. To assist in determining conformity, the population projections on which the 1982 SIP revision is based should be capable of being disaggregated at the time of project analysis so that the areas affected by individual federal actions not explicitly accounted for in the SIP can be identified.

II. SIP Development Process

The Clean Air Act, as amended in 1977, and subsequent regulations, policies and guidance from EPA have defined specific procedural requirements for developing SIP revisions for nonattainment areas. Appendix B includes a list of selected guidance documents that should be used in the preparation of the 1982 SIP. EPA regional offices will work with states and affected local governments during the preparation of the SIP to help ensure that procedural requirements are satisfied and that interim products and activities are completed on a schedule that will enable the July 1, 1982 submittal deadline to be met.

A. Consultation Among State and Local Officials

Section 121 of the Clean Air Act requires each state to provide a process for consultation with local governments, organizations of local elected officials, and federal land managers during certain actions under the Act, including preparation of SIP revisions for nonattainment areas. Section 174 of the Act requires a joint determination by state and local officials of the roles that various governmental agencies will take in the SIP development, implementation, and enforcement process. Section 174 also requires the governor of each state to designate the agency or agencies responsible for SIP development. The designation made by the governor for the 1979 SIP submittal remains in effect, unless the governor designates a new agency. The joint determination of responsibilities and any revised agency designations should be completed early in the process and must be submitted as a part of the 1982 SIP revision. Final regulations on section 174 and 121 (40 CFR Part 51, [Subpart M]) were published on June 18, 1979 (44 FR 35176).

B. Establishment of Emission Reduction Targets

The control strategy for the 1982 SIP must reflect agreement among affected state and local officials on the emission reductions needed to attain NAAQSs. It is particularly important that the emission reduction targets established for stationary and mobile sources be determined through a process of negotiation among state and local officials of affected jurisdictions. In most cases, the initial emission reduction targets will be established soon after the technical evaluation of reasonably available stationary and mobile source control measures. Targets may have to be revised as additional information becomes available during SIP development. Revised targets should also be determined through consultation among state and local officials.

C. Analysis of Alternatives and Their Effects

In order for decision-makers and the public to have adequate information during development of SIPs requiring measures beyond the minimum described in subsections I.B.-I.D, alternative control strategies should be developed and analyzed. For example, where a vehicle I/M program and RACT applied to all major stationary sources will not be sufficient, in combination with reasonably available transportation measures, to attain standards, a range of more stringent

stationary and mobile source controls should be evaluated to determine the best combination to achieve the required emission reductions. This evaluation should be used in determining the emission reduction targets described in the previous subsection. Examples of these more stringent controls are listed in subsection I.F.

The Clean Air Act requires that SIP submittals include an analysis of air quality, health, welfare, economic, energy, and social effects of the SIP and of the alternative measures considered during SIP development. EPA believes that, in assessing the effects of alternative control measures, two national concerns should receive special emphasis. These concerns are (1) conservation of petroleum and natural gas, and (2) protection of the economies of declining urban areas. Additional emphasis on the effects of SIPs on energy conservation and economies of distressed urban areas will implement the intent of Executive Order 12185, Conservation of Petroleum and Natural Gas (45 FR 8537, February 7, 1980), and the National Urban Policy.

III. Air Quality and Emission Data Bases

The requirements for the 1979 SIP submittal included use of the best data available at the time of SIP development. Although states generally complied with this provision, in many cases the available data base had many shortcomings. All states will have had adequate time by 1982 to have an updated data base.

States will need to have the data necessary for SIP development significantly before the July 1, 1982 submittal date. To ensure that this effort receives appropriate priority and attention, EPA expects states to complete data collection, analyses, and documentation by December 31, 1981. This requirement in no way relieves a state from any prior commitments to have such data available at an earlier date.

Emission inventories should, where possible, be prepared for a 1980 base year and projected to a date that will, at a minimum, include the anticipated year of attainment. Population projections and other forecasts used for determining growth rates and areawide emission estimates must be consistent with population projections developed in accordance with the EPA's cost-effectiveness guidelines for wastewater treatment facilities (40 CFR Part 35, Supart E, Appendix A).

The most recent three years of air quality data from the state and local air

monitoring system network must be reduced, validated, and summarized in the plan submittal. Generally, this will include all data collected through the third quarter of 1981. All data from special studies implemented to support the modeling effort must also be compiled, reduced, and documented. If a state cannot reduce, evaluate, and validate data through the third quarter of 1981 in sufficient time to develop the SIP revision and still meet intergovernmental consultation, public participation, and other requirements, the state shall present the data in the SIP submittal and describe how the data may effect the plan.

A. Data for Ozone SIP Revisions

EPA previously described the minimum data that the Agency anticipated would be necessary to prepare an ozone modeling effort for four levels of analyses (44 FR 65667, November 14, 1979). It now appears, however, that many of the areas requiring the more sophisticated levels of modeling will not be able to complete the more extensive data base collection efforts required for these models in time to support the 1982 SIP submittal. Accordingly, every urban area must complete a data base sufficient to support at least a Level III (city-specific EKMA) modeling analysis. The elements of this data base are summarized in Appendix D.

EPA anticipates that states with especially severe ozone problems will need to apply a photochemical dispersion model or an equivalent technique in subsequent modeling analyses after 1982. Data collection efforts should be structured to provide for this contingency.

In order to ensure that all the data bases will be compatible and that there is a consistent level of documentation and quality assurance, state submittals of environmental data must be consistent in format and content with the EPA guideline document, *Emission Inventory Requirements for 1982 Ozone SIPs*.

B. Data for Carbon Monoxide SIP Revisions

The emission inventory for carbon monoxide must be of sufficient accuracy and detail to provide the necessary input to models, and to determine the effectiveness of proposed control measures. The inventory should normally represent a typical weekday during the worst carbon monoxide season and should cover the entire urban area. More detailed inventories for smaller hotspot areas may be needed for analyzing specifically identified

problems. In developing carbon monoxide emission inventories states may, if they desire, limit the identification of stationary sources to those with potential emissions of 1000 tons per year. The final acceptability of the inventory developed will be dependent on the modeling approach selected and will be judged on a case-by-case basis.

IV. Modeling

States will need to apply the best tools available in their 1982 SIP submittal. The air quality models that EPA considers acceptable are identified below.

A. Ozone Models

Photochemical dispersion models have the greatest potential for evaluating the effectiveness of ozone control strategies. This potential arises primarily from the ability to relate emissions directly to ambient ozone concentrations, taking into account atmospheric chemistry and dispersion. In most cases, however, data requirements associated with applying these models by 1982 are prohibitive. Of the generally available, less data intensive models, only the various applications of EKMA consider local meteorological influences and atmospheric chemistry in evaluating control requirements. The city-specific EKMA approach is the most promising for 1982 and EPA recommends its use. If the agency preparing the SIP already has the capability to apply a more sophisticated level of modeling and wants to do so, EPA encourages such applications. The use of a modeling approach other than city-specific EKMA must be approved by EPA prior to a commitment by the state to its use. EPA is currently finalizing the guideline on the use of city-specific EKMA; the guideline should be available by March 1981.

The inability of other simpler models to adequately consider chemical kinetics and meteorological parameters reduces their ability to represent local situations. Accordingly, EPA will not consider plans based on linear or proportional rollback to provide an adequate demonstration of attainment. EPA is publishing a proposal in today's Federal Register to modify 40 CFR 51.14 by deleting the provision allowing the use of rollback as an acceptable modeling technique. A state that used rollback in the SIP revision submittal in 1979 to demonstrate attainment by 1982 will not be required to revise the analysis on which its SIP is based, unless EPA

determines the SIP to be deficient for attaining the ozone NAAQS. Upon such a determination, the state will be required to meet the provisions of this policy including adoption of the minimum control measures, as well as the modeling requirements.

B. Carbon Monoxide Models

States and urban areas must estimate the impact of local and regional control strategies on carbon monoxide nonattainment areas and demonstrate attainment of the carbon monoxide standard. The generally available carbon monoxide models are described in *Guideline on Air Quality Models*, April 1978, EPA 450/2-78-027. These guidelines, and any subsequent updates, should be followed in preparing a carbon monoxide attainment analysis. The acceptability of models other than those listed in the guideline will be evaluated on a case-by-case basis. Other models proposed for use must be adequately documented and validated.

Dated: January 13, 1981.

Douglas M. Costle,
Administrator.

Appendix A—Extension Areas

Table 1.—Areas Requesting an Extension Beyond 1982 for Attaining the Ozone Standard

| EPA region | State | Metropolitan area |
|------------|---------------------------|--|
| I..... | Connecticut..... | Statewide. |
| | Massachusetts..... | Statewide. |
| | Rhode Island..... | Statewide. |
| II..... | New Jersey..... | Statewide. |
| | New York..... | New York City. |
| III..... | Delaware..... | Wilmington. |
| | District of Columbia..... | Washington. |
| | Maryland..... | Baltimore, Washington. |
| | Pennsylvania..... | Allentown, Philadelphia, Pittsburgh, Scranton/Wilkes-Barre. |
| | Virginia..... | Richmond, Washington. |
| IV..... | Kentucky..... | Cincinnati, Louisville. |
| | Tennessee..... | Nashville. |
| V..... | Illinois..... | Chicago, St. Louis. |
| | Indiana..... | Chicago, Louisville. |
| | Michigan..... | Detroit. |
| | Ohio..... | Cincinnati, Cleveland. |
| | Wisconsin..... | Milwaukee. |
| VI..... | Texas..... | Houston. |
| VII..... | Missouri..... | St. Louis. |
| VIII..... | Colorado..... | Denver. |
| | Utah..... | Salt Lake City. |
| IX..... | California..... | Fresno, ¹ Sacramento, San Diego, San Francisco Bay Area Basin, South Coast Basin, ² Ventura-Oxnard. ² |
| X..... | Oregon..... | Portland. |
| | Washington..... | Portland, Seattle. |

¹ San Joaquin Valley Nonattainment Area.

² South Central Coast Nonattainment Area.

Table 2.—Areas Requesting an Extension Beyond 1982 for Attaining the Carbon Monoxide Standard

| EPA region | State | Metropolitan area |
|------------|---------------------------|---|
| I..... | Connecticut..... | Bridgeport, Hartford, New Haven. |
| | Massachusetts..... | Boston, Springfield, Worcester. |
| | New Hampshire..... | Manchester, Nashua. |
| II..... | New Jersey..... | Atlantic City, Burlington, Camden, Elizabeth, Freehold, Hackensack, Jersey City, Morristown, Newark, Paterson, Penns Grove, Perth Amboy, Somerville, Toms River, Trenton. |
| | New York..... | New York City. |
| III..... | District of Columbia..... | Washington. |
| | Maryland..... | Baltimore, Washington. |
| | Pennsylvania..... | Pittsburgh, Philadelphia. |
| IV..... | Georgia..... | Atlanta. |
| | Kentucky..... | Louisville. |
| | North Carolina..... | Charlotte. |
| | Tennessee..... | Nashville, Memphis. |
| V..... | Illinois..... | Chicago. |
| | Ohio..... | Cincinnati, Cleveland. |
| | Michigan..... | Detroit. |
| | Wisconsin..... | Milwaukee. |
| VI..... | New Mexico..... | Albuquerque. |
| VII..... | Missouri..... | St. Louis. |
| VIII..... | Colorado..... | Denver, Colorado Springs, Fort Collins, Greeley. |
| | Utah..... | Salt Lake City. |
| IX..... | Arizona..... | Phoenix. |
| | California..... | Fresno, Lake Tahoe, Sacramento, San Diego, San Francisco Bay Area Basin, South Coast Basin. |
| | Nevada..... | Las Vegas. |
| X..... | Oregon..... | Eugene, Medford, Portland. |
| | Washington..... | Seattle, Tacoma. |
| | Idaho..... | Boise. |

Appendix B—Selected EPA Guidance for SIP Development

The following list identifies selected EPA guidance for SIP development. A compilation of major EPA guidance for SIP development is included in the "Air Programs Policy and Guidance Notebook," which is distributed to state and local agencies. Copies of the notebook are available for copying at the EPA Public Information Reference Unit in Washington, D.C. and at each EPA regional office.

1. Criteria for Approval of 1979 SIP Revisions, memorandum from Douglas M. Costle, Administrator of EPA to Regional Administrators, Regions I-X, February 24, 1978 (43 FR 21673).
2. Memorandum of Understanding Between DOT and EPA Regarding the Integration of Transportation and Air Quality Planning, June 1978.
3. EPA-DOT Transportation-Air Quality Planning Guidelines, June 1978.
4. Inspection/Maintenance Policy, memorandum from David G. Hawkins to Regional Administrators, Regions I-X, July 17, 1978.
5. Determination of Emission Reduction Responsibilities, memorandum from David G. Hawkins to Regional Administrators, August 1, 1978.

6. General Preamble for Proposed Rulemaking, April 4, 1979 (44 FR 20372). The General Preamble was amended on the following dates: April 30, 1979 (44 FR 25243); July 2, 1979 (44 FR 38583); August 28, 1979 (44 FR 50371); September 17, 1979 (44 FR 53161); and November 23, 1979 (44 FR 67182).

7. 40 CFR Part 51, Subpart M—Intergovernmental Consultation, June 18, 1979 (44 FR 35176)

8. EPA-DOT Expanded Public Participation Guidelines, May 1, 1980 (45 FR 42032).

9. DOT-EPA Procedures for Conformance of Transportation Plans, Programs and Projects with Clean Air Act State Implementation Plans, June 12, 1980.

10. Policy and Procedures to Implement Section 316 of the Clean Air Act, as Amended, memorandum from Douglas M. Costle to Regional Administrators, Regions I-X, July 23, 1980, (45 FR 53382).

Appendix C—Description of Terms Used in the Transportation-Air Quality SIP Development Process

Adopted Measures

A transportation measure, program, or policy that state and local planning and implementing agencies and governments have agreed to include in the official SIP submission.

Planning Process

The process defined in the September 17, 1975 Federal Highway Administration (FHWA)-Urban Mass Transportation Administration (UMTA) regulations, the June 1978 EPA-DOT Transportation-Air Quality Planning Guidelines, and the May 1, 1980 EPA-DOT Expanded Public Participation Guidelines. Through this process transportation measures are introduced, evaluated, placed in the Transportation Systems Management (TSM) or long range element of the urban transportation plan, and advanced to the Transportation Improvement Program (TIP) and the annual element of the TIP.

Programming Process

The process by which transportation measures are advanced from the annual element of the TIP to the capital programs and budgets of implementing agencies and then to funding by state and local governments, FHWA (through the statewide 105 program), or UMTA (through the section 3 and 5 programs).

Expeditious Attainment Date

The attainment date approved in the 1979 SIP submission. This date may be modified if the analysis of alternatives done as part of the development of the 1982 SIP submittal shows that an earlier date is possible through expeditious implementation of all reasonably available control measures or that a later date is necessary because the approved attainment date cannot be achieved.

Reasonably Available Transportation Measures

A measure that has been determined to be beneficial to air quality and which will not result in substantial and long-term adverse

impacts. These measures need to be adopted by the affected state and local officials participating in the planning and programming processes. The process of determining reasonably available transportation measures is analytical, participatory, and negotiatory, and involves the public, as well as local, state, and federal agencies and officials. The analytic part of the process includes determinations of technical and economic feasibility.

Expeditious Implementation of Reasonably Available Transportation Measures

Implementation by the earliest possible date considering:

1. The minimum time required to advance the measure through planning and programming processes.
2. The minimum time required to obtain implementation commitments.
3. The minimum time required to construct (if needed) and begin operation of the measures.

Implementation Commitments

Certification (may be by reference to budgets or other legally adopted documents) by federal, state, and local agencies with the authority to implement SIP measures that (1) funds to implement the measure are obligated and (2) all necessary approvals have been obtained. Identification by the implementing agency of the scheduled dates for start of construction (if appropriate) and for start of operation.

If a project has not reached the stage of receiving budget approval, then the implementation commitment should be in the form of a schedule that lists the projected dates for completing the major steps required to advance the measure through the remaining planning and programming processes. The schedule should also contain an identification of the responsible agencies that must take significant actions to implement the measure.

Actions by many agencies and elected officials are usually required before a transportation project is implemented. The SIP should list the important actions, the agencies or officials required to take each action, and a schedule that will lead to implementation.

The lead planning agency is usually charged with obtaining the various commitments. This requires:

1. Identifying all remaining actions and the agency or official responsible for each action.
2. Consulting with each agency or official to establish the date by when the action will be taken.

The product of these efforts should be submitted in the SIP in a form similar to the following example.

Example

The MPO for an urban area has adopted for inclusion in the SIP a busway that will connect a suburban residential area with the central business district. Operation of the busway will require the purchase of 25 new buses. Corridor location studies have been completed and final design is underway. The provision in the 1982 SIP submittal should include an approximate schedule similar to

that outlined below for completion of the project:

1. MPO places project in annual element of the SIP; each funding agency prepares budget requests for necessary funds—Complete.

2. Transit operating agency adopts project as part of capital program—Complete.

3. Transit operating agency or appropriate project sponsor solicits approval of local government share of project costs from the city and county councils—Fall 1982.

4. Transit operating agency submits project application to state department of transportation—Winter 1982.

5. State department of transportation requests state legislature to appropriate state share of matching funds—Spring 1983.

6. Transit operating agency submits a grant application to UMTA (submittal occurs if the funding match has been approved; if the project is delayed at this point, contingency provisions will be adopted)—Summer 1983.

(Checkpoint: project receives approval from UMTA)—Spring 1984.

7. Transit operating agency places order for new buses—Spring 1984.

8. State department of transportation starts construction contract for busway—Winter 1985.

9. Agreement with state and local enforcement authorities is signed—Spring 1986.

(Checkpoint: Buses delivered and construction completed)—Summer 1986.

10. Transit operating agency initiates operation—Summer 1986.

Justification for not Adopting a Section 106(f) Measure

Justification should include:

1. Documentation of air quality, health, welfare, economic, energy, social and mobility effects of the measure, as appropriate for the type of measure and the scale of application.

2. Documentation that the measure was considered in a process that involved the public and state and local officials.

3. Determination that implementation of the measure results in substantial and long-term adverse impacts.

4. Demonstration that the air quality standards can be expeditiously attained without the measure.

Monitoring Plan

The monitoring plan to be contained in the 1982 SIP should be designed for periodically assessing the extent to which transportation measures, either individually or packaged, are resulting in projected emission reductions and the reasons for any shortfalls in reductions. The monitoring plan need *not* cover air quality monitoring. The plan should contain methods for determining the reasons for success or failure of the emission reduction achievements of the transportation measures contained in the 1982 SIP. The monitoring plan should depend upon existing data, regularly collected data, surrogate emission indicators (such as the number of auto trips, trip speeds, etc.) and approximation techniques. Collection of new data should be minimized.

Contingency Plan

The contingency provision is needed in the event that EPA calls for a SIP revision based on its determination that the reasonable further progress schedule is not being met. The contingency provision contains two parts. The first part is only for areas over 200,000 population. For these areas, the contingency provision should include a locally developed list of projects which implementing agencies have agreed can be delayed during an interim period while the SIP is being revised. The second part of the contingency provision is a description of a process for determining additional transportation measures beneficial to air quality that can be implemented to compensate for unanticipated shortfalls in emission reductions or can be accelerated to replace adopted measures that are not proceeding on schedule. This second part of the contingency provision should be included in every 1982 SIP submittal.

Appendix D—Summary of Minimum Level III Data Requirements for 1982 Ozone Modeling Submittals

A. Emission Data Requirements

1. *Spatial Resolution.* County-wide emission inventories for VOCs and nitrogen oxides (NO_x) are needed for a Level III analysis.

2. *Temporal Resolution.* Typical summer weekday emission estimates are required as part of the Level III data submittal. Preparation of these estimates is described in the guideline, *Emission Inventory Requirements for the 1982 Ozone SIPs.*

3. *VOC Categories.* Classification into reactive species of VOCs is not required for a Level III analysis.

4. *Source Category Delineation.* It is necessary to separate the emissions estimates according to major source categories such as is described in the guideline, *Emission Inventory Requirements for the 1982 Ozone SIPs.* This disaggregation of estimates is useful for making projections of future aggregated emissions.

B. Air Quality Data Requirements

1. *Ozone Monitors* (3 sites). Ozone monitors should be located at (a) one upwind site, (b) one downwind site at the edge of the urbanized area, and (c) one downwind site approximately 15–40 kilometers from the urbanized area.

2. *THC/CH₄ NO_x Monitors* (1 site required, 2 sites desirable). Guidance presented in EPA-450/4-80-011, *Guidance for the Collection of Ambient NMOC Data for Use in 1982 Ozone SIP Development, and Network Design and Siting Criteria for the NMOC and NO_x Monitors*, should be followed.

3. *Upwind Precursor Data.* Optional air quality data for Level III are measurements of ambient NO_x and THC/CH₄ at one site upwind of an urbanized area. These data are generally unnecessary and are needed only for unusual cases when it is desirable to take explicit account of transported precursors in the analysis. Most studies have indicated that transported ozone is of greater significance than transported precursors in contributing to urban problems. Because of the lack of precision associated with nonmethane

hydrocarbon (NMHC) estimates from continuous THC/CH₄ monitors at low concentrations, use of these instruments at upwind sites is not recommended. It is preferable to collect a limited number of grab samples, analyze these chromatographically, and sum species to estimate upwind NMHC. Guidance presented in EPA-450/4-80-008, *Guidance for the Collection and Use of Ambient Hydrocarbon Species Data in the Development of Ozone Control Strategies*, should be followed. Continuous measurement of NO/NO_x is appropriate.

C. Meteorological Data Requirements

1. *Upper Air and Surface Temperature Data.* Estimates of the morning (8:00 a.m.) and maximum afternoon mixing heights are required. Preferably, estimates should be obtained using the nearest National Weather Service radiosonde data (if available) in conjunction with hourly urban surface temperature data. If radiosonde data are not available, morning and afternoon mixing heights can be estimated using AP-101, "Mixing Heights, Wind Speeds and Potential for Urban Air Pollution Throughout the Contiguous United States."

2. *Surface Wind Data.* Surface wind data at two sites (one site located in an area of high precursor emissions and another outside the urban core) are required. The wind data are used to help ensure that the recorded design value is measured downwind of the city.

Appendix E—Regional Office Locations of Comments and Responses on the Proposed 1982 SIP Policy

The locations and times for review of the comments on the proposed 1982 SIP policy and EPA responses may be determined by contacting the following:

- Harley F. Laing, Chief, Air Programs Branch,
EPA—Region I, John F. Kennedy Federal
Building, Boston, MA 02203, 617-223-6883
- Bill Baker, Chief, Air Programs Branch,
EPA—Region II, 26 Federal Plaza, New
York, NY 10007, 212-264-2517
- Raymond Cunningham, Chief, Air Programs
Branch, EPA—Region III, Curtis Building,
6th & Walnut Streets, Philadelphia, PA
19106, 215-597-8175
- Winston Smith, Chief, Air Programs Branch,
EPA—Region IV, 345 Courtland Street,
N.E., Atlanta, GA 30308, 404-881-3043
- Steve Rothblatt, Chief, Air Programs Branch,
EPA—Region V, 230 South Dearborn Street,
Chicago, IL 60604, 312-353-6030
- Jack Divita, Chief, Air Programs Branch,
EPA—Region VI, First International
Building, 1201 Elm Street, Dallas, TX 75270,
214-767-2742
- Art Spratlin, Chief, Air Programs Branch,
EPA—Region VII, 324 East Eleventh Street,
Kansas City, MO 64106, 816-374-3791
- Robert DeSpain, Chief, Air Programs Branch,
EPA—Region VIII, 1880 Lincoln Street,
Denver, CO 80295, 303-837-3471
- David Howekamp, Chief, Air Programs
Branch, EPA—Region IX, 215 Fremont
Street, San Francisco, CA 94105, 415-556-
4708
- Richard Thiel, Chief, Air Programs Branch,
EPA—Region X, 1200 6th Avenue, Seattle,
WA 98101, 206-442-1230

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