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Federal Register, Vol. 44, No. 239, 71780-71788, 12/11/1979, "Air Pollution Control; Recommendation for Alternative Emission Reduction Options Within State Implementation Plans."

Summary: The policy statement set forth below (1) outlines how states can revise their State Implementation Plans to permit sources to place a greater burden of control where the marginal cost of control is low and to reduce control requirements where the cost is high and (2) encourages states to be receptive to proposals from sources seeking to employ a more economically efficient mix of controls.

This policy statement, commonly referred to as the "bubble" concept, is one in a series of steps designed to produce a coherent, easy-to-use system, which we have sometimes called "controlled trading." Other steps have included the offset and banking policies. This system will reconcile improved air quality with economic growth at the least possible cost, encourage firms to develop new ways to control pollution, and enable government and industry to solve problems more flexibly.

Federal Register notice attached

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[FRL 1360-3]

Air Pollution Control; Recommendation for Alternative Emission Reduction Options Within State Implementation Plans

AGENCY: Environmental Protection Agency.

ACTION: Policy Statement.

SUMMARY: The policy statement set forth below (1) outlines how states can revise their State Implementation Plans to permit sources to place a greater burden of control where the marginal cost of control is low and to reduce control requirements where the cost is high and (2) encourages states to be receptive to proposals from sources seeking to employ a more economically efficient mix of controls.

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EFFECTIVE DATE: December 11, 1979.

FOR FURTHER INFORMATION CONTACT:

General inquiries regarding the policy may be directed to:

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Leo Stander, Control Programs Operations Branch, Control Programs Development Division, EPA, Office of Air Quality Planning and Standards (MD-15), Research Triangle Park, NC 27711, (919) 541-5365.

Inquiries regarding specific proposals for alternative control strategies should be directed to the appropriate regional contact:

Linda Murphy, Chief, Stationary Source Section, Air Branch, EPA Region I, JFK Federal Building, Boston, MA 02203, (617) 233-4448 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont).

Kennth Eng, Chief, Air and Environmental Applications Section, Permits Administration Branch, EPA Region II, 26 Federal Plaza, New York, NY 10007, (212) 264-4711 (New York, New Jersey, Puerto Rico, Virgin Islands).

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Randy Brown, Chief, Technical Support Section, Air Programs Branch, EPA Region VI, 1201 Elm Street, Dallas, TX 75270, (214) 767-2742 (Arkansas, Louisiana, Oklahoma, New Mexico, Texas).

Gale Wright, Chief, Technical Analysis Section, Air Support Branch, EPA Region VII, 324 East 11th Street, Kansas City, MO 64106, (816) 374-3791 (Nebraska, Iowa, Kansas, Missouri).

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Wally Woo, Engineering Section, Air Technical Branch, EPA Region IX, 215 Fremont Street, San Francisco, CA 94105, (415) 556-8063 (California, Nevada, Arizona, Hawaii, American Samoa, Guam, Northern Mariana Islands).

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SUPPLEMENTARY INFORMATION:

Summary of Key Changes

EPA has extensively evaluated the alternative emission control approach and has considered comments submitted regarding the proposed policy. As a result, the Agency has made three key changes in the policy: (1) Sources may use alternative strategies involving more than one plant; (2) states may consider open dust trades in some circumstances, though EPA will closely scrutinize such requests and will require conclusive demonstrations of equivalence before granting approval; and (3) EPA may approve compliance date extensions in special cases. The policy also contains many clarifications and less significant changes. These are discussed in the summary of comments, which follows the policy statement.

This policy statement does not establish conclusively how EPA will resolve issues in individual cases. The Clean Air Act and the Administrative Procedure Act guarantee the opportunity for public comment in each proceeding that places alternative control requirements into effect as a State Implementation Plan revision. Therefore, although the public has had the opportunity to comment on the issues in this policy statement, EPA will consider additional comment on these same issues in individual proceedings.

Policy Statement on Alternative Emission Reduction Options Within State Implementation Plans

Introduction

The Clean Air Act requires states to develop State Implementation Plans (SIPs) and source-specific compliance schedules to attain and maintain ambient air quality standards. In developing these plans, states establish emission limits which, when applied to emission points contributing to the ambient air problem, are calculated to ensure that the standards are met. In making these decisions, states regularly take into account the nature and amount of emissions from each emission point, the control technology available, and the time required for its installation.

SIPs, however, are not always as economically efficient as they could be, and current regulations and policies do not prompt companies to seek innovations in control technology. For these reasons, the Environmental Protection Agency is adopting this policy explaining how plants can reduce control where costs are high in exchange for a compensating increase in control where abatement is less expensive. We strongly recommend that the states (1) inform sources that the alternative emission reduction approach is available, (2) explain this policy's advantages and conditions of use, and (3) be receptive to proposals from sources that want to use a more cost-effective mix of controls. Properly applied, this policy should promote greater economic efficiency and increased innovation by providing plant managers with an economic incentive to develop new control strategies. This is a rare opportunity to provide such positive incentives.

It is important to note, however, that with one exception EPA can only approve alternative control strategies in areas where states have successfully demonstrated that they can meet air quality standards by the statutory deadlines. Therefore, EPA will not allow sources to use the alternative approach in a way that jeopardizes attaining requirements of the Clean Air Act by permitting degradation of air quality in excess of the SIP requirements or by weakening enforcement. To avoid these

problems, EPA has carefully stipulated the use of the alternative approach, as described in detail in the body of this statement.

With this policy, we are urging states to be receptive to alternative emission reduction applications whenever eligible sources propose them and particularly when the states are drawing up or revising SIPs.[1] EPA will work with the states in expediting the SIP revision process, especially where the trades are straightforward. The Agency is committed to promptly reviewing alternative proposals so that the maximum benefits can be derived from this policy.

The Alternative Emission Reduction Concept

A. What Is the Concept?

The primary tests to which EPA subjects State Implementation Plans include: [2]

- Do their provisions ensure the attainment and maintenance of ambient air quality standards as expeditiously as practicable?
- Do their provisions ensure reasonable further progress toward attainment?
- Are their provisions enforceable?

If the control method adopted meets these requirements, EPA generally does not stipulate the degree to which a source must control individual emission points.

Under the alternative emission reduction concept, a source with multiple emission points (stacks, vents, ports, etc.)—each of which is subject to specific emission limitation requirements under an approved SIP—may propose to meet the SIP's total emission control requirements for a given criteria pollutant with a mix of controls that is different from that mandated by the existing or proposed regulations. Sources will have the opportunity to come forward with alternative abatement strategies that would result in the same air quality impact but at less expense by placing relatively more control on emission points with a low marginal cost of control and less on emission points with a high cost.

Of course, these strategies are subject to restrictions that might apply under the Clean Air Act, such as National Emission Standards for Hazardous Pollutants (NESHAPS) or rules for the Prevention of Significant Deterioration (PSD).

EPA has already introduced the concept of trading emissions in previous policies. For example, the concept is generally similar to the offset policy (40 CFR, Part 51, Appendix S).

B. Eligibility

1. *Applicability.* Sources may apply for alternative emission approaches for existing [3] emission limitations established under Section 110 and/or Part D as part of the SIP. Sources may also propose alternative approaches for SIP requirements that are under development. This policy statement does not apply to or supersede the conditions that sources must meet under nonattainment or PSD permit programs, New Source Performance Standards (NSPS), NESHAPS [4], or other conditions that the Act specifically requires for new or modified sources. Separate Federal Register notices [5] discuss requirements for trading under permit programs for new or modified stationary sources.

2. *Demonstration of Attainment by Statutory Deadlines.* Sources may use alternative emission reduction approaches only in areas that can demonstrate attainment by the statutory deadlines (and reasonable further progress toward attainment) for those pollutants included in emission reduction alternatives. An adequate demonstration may include commitments to specific control measures on a specified schedule. However, trades involving emission points that will be regulated in the future under such commitments may not be undertaken until the state adopts the measures. A state may submit an alternative control strategy involving these emission points at the same time or after it submits its newly adopted general regulation to EPA for approval.

There is one exception to the condition that areas demonstrate attainment before alternative control strategies are allowed. Under certain circumstances, ozone SIPs may be approved by EPA despite a failure to demonstrate attainment by 1982. Such SIPs must require use of Reasonably Available Control Technology (RACT) for sources of Volatile Organic Compounds (VOC) included in Control Techniques Guidelines (CTG) categories. These sources may use alternative control strategies to meet RACT, but only for those emission points that are within the same CTG category.[6]

3. *Effect of Compliance Status.* Sources that wish to use an alternative approach to existing SIP requirements will be requesting that emission limitations and compliance schedules for individual emission points be changed. In order to properly evaluate whether the alternative approach is equivalent to the existing requirement, it is necessary to have established compliance agreements for all of the emission points affected by the alternative approach. Thus, any source that is adhering to its compliance agreements for the emission points included in the alternative approach, regardless of any past history of noncompliance, is eligible to apply.

In the absence of such compliance, consideration of SIP revisions setting forth alternative control strategies would only protract and confuse efforts to enforce the SIP. Sources that have successfully deferred compliance would be tempted to use the alternative approach to argue for further delay or to alter emission requirements so as to frustrate enforcement efforts. Permitting use of the alternative approach in such instances would only serve to continue unlawful pollution and increase the inequity between sources that have incurred the expense and difficulty of compliance and those that have so far avoided compliance.

Accordingly, sources that wish to use an alternative control strategy, but have not yet reached an EPA-approved agreement with the state (or reached agreement with EPA as appropriate) on their compliance schedules for all of the emission points included in the alternative approach [7] or are not complying with these agreements, may apply for the alternative approach only if they:

i. Come into compliance; or

ii. Meet an EPA-approved compliance schedule; or

iii. Become subject to court decree: (1) In an action in which EPA was a party or which decree EPA has found to be

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[1] Under the Clean Air Act, in certain cases, EPA may draw up or revise SIPs. In those cases, we will advise eligible sources and will be receptive to such applications where appropriate.

[2] See 44 FR 20373 for a complete list and discussion.

[3] "Existing" emission limitations are those requirements that the state has adopted or EPA has promulgated at the time a source proposes an alternative strategy. States may submit alternative strategies to EPA at the same time or after they submit their applicable newly adopted state regulations.

[4] Under limited circumstances, sources may include pollutants that are listed or regulated under Section 112 in alternative control strategies. Section D.1.c. discusses this further.

[5] See the Emission Offset Interpretative Ruling, 40 CFR Part 51, Appendix S, as revised 44 FR 3274 (January 16, 1979); proposed rule, 44 FR 51924 (September 5, 1979).

[6] For further information regarding the use of CTGs, See 44 FR 53762–63.

[7] Of course, this consideration does not apply to those emission points for which EPA or the state have not required controls.

satisfactory, and (2) which decree recognizes the possibility of SIP revision and allows for timely modification of the decree without delay in the final compliance date.

To be acceptable, any compliance schedule under ii and any decree under iii (1) must set out a timetable and emissions limitations with which the source has agreed to comply (i.e., is not appealing or otherwise contesting), (2) must provide for a resolution of penalty issues and other sanctions, and (3) must not contain any provisions allowing the source to delay its compliance or to avoid sanctions for noncompliance with the existing requirement until EPA has promulgated the alternative proposal as a SIP revision.

C. Implementing the Alternative Approach

1. *Sources Initiate Alternatives.* It is the regulatee's responsibility to come forward with the alternative control approach. EPA encourages the states also to require the regulatee to demonstrate satisfactorily, *entirely at its expense,* that the proposal is equivalent to the existing SIP requirements in enforceability and environmental impact. Because of the cost, we advise sources to discuss the demonstration requirements with control agencies before preparing the demonstration. Control agencies, however, should not begin to formally review proposals until the source has completed the demonstrations. In this way the resource demands on control agencies are limited primarily to deciding what kind of demonstration is required and to reviewing the results. To minimize the possibility of subsequent delays, EPA also encourages control agencies to discuss issues with EPA as they arise.

The process of approving alternative control strategies will differ depending on whether the source is proposing an alternative to existing SIP requirements or to requirements that are under development. Where existing SIP requirements are concerned, overall emission limits and compliance deadlines are known. Once a plant comes forward with a promising alternative proposal that seems capable of attaining the goals of the current compliance schedule, the control agency will decide on a test to verify the equivalency of the proposed trade. If the source is able to present evidence that the control agency judges to be sufficient, the control agency may submit the alternative approach to EPA as a SIP revision.

Although sources may propose an alternative for existing SIP requirements at any time, it is clearly to their advantage to do so as early as possible. Control agencies should expect sources to meet the requirements of their existing schedules on time until EPA approves the alternative approach. In some cases, a source may have to make a pollution control investment that it would not have to make under the alternative approach. By presenting alternative proposals as early as possible (preferably during the engineering and design period that is provided at the beginning of most compliance schedules), sources can avoid such conflicting investments.

When a state (or EPA) is developing a new SIP, sources may present a counterproposal in anticipation of overall emissions limits or in response to limits being proposed. The source would then have to show that its alternative mix of controls would be environmentally equivalent to the process-specific standards. If the demonstration is successful, the state can adopt the counterproposal as part of the SIP.

The SO_2 regulation for the Cincinnati Gas and Electric Company's Beckjord Power Plant in Ohio provides one example of how a source can use the alternative emission reduction approach. This SIP regulation contains an alternative set of limits that the power plant may use in lieu of a uniform limit at each of its five boiler stacks. The plant still must meet specific limits at its individual stacks, but it can select these limits by using equations that make the air quality effects of the emissions under the emission reduction alternative equal to the air quality impact permitted under the uniform emissions limit. This flexibility allows the power plant to apply the lowest-cost mix of low sulfur coal, and/or stack gas cleaning controls among the plant's five boilers. In this case, a clear and conclusive demonstration has been made that differences in emissions from each of the stacks will not result in overall differences in ambient air quality attainment or maintenance.

Another situation where a source can apply this approach is in different stages of a plant's production process that emit the same kind of pollutant. For example, the surface coating and miscellaneous metal categories within an automotive assembly plant are both sources of hydrocarbons. A source may want to continue using lacquer in its repair operation within the assembly plant. By applying greater control to the miscellaneous metal category (such as switching to powder coating) the source could reduce the amount of control needed for the auto assembly category. This approach would allow the source to achieve the same overall emissions requirement at a lower cost.

2. *SIP Revisions Required.* Each alternative approach must be adopted in a SIP revision approved or promulgated by EPA.[8]

D. Conditions for Using the Alternative Approach

States applying the alternative approach must continue to ensure (1) attainment and maintenance of ambient air quality standards as expeditiously as practicable, (2) reasonable further progress, (3) enforceability, and (4) compliance with all other requirements of the Act. To assist states in achieving this basic requirement, EPA has established certain conditions that an alternative approach must meet before it can be approved.

1. *Air Quality Considerations.*—a. *Air quality standards must be met.* The overriding command of the statute is to attain and maintain ambient air quality standards. Many states have been required to submit revised SIPs because existing regulations were insufficient to meet this basic condition of the Act. Where the revised plans are inadequate to meet the statutory deadlines contained in the Clean Air Act, as amended, states may not approve alternative control strategies except as discussed in Section B, Eligibility. Furthermore, if attainment is not achieved as expected in the areas where the revised plans were approved, control agencies may require sources to install more stringent controls on emission points where the requirements were relaxed under this policy.

The treatment of certain low-emitting processes deserves special mention with regard to ensuring that attainment is achieved as expected. Some existing emission points may be releasing less pollutants than existing SIP regulations allow, for example, because they are burning a clean fuel or operating at less that full capacity. Sources may not use the difference between the SIP-allowable emissions and the lower actual emissions to increase emissions from another emission point unless they can show that the SIP is not relying on the actual emissions of the low-emitting process to attain and maintain the ambient air quality standard and achieve reasonable further progress toward attainment in the interim. Similarly, if a source proposes to include an emission point in an alternative

[8] Revisions to construction or operating permits are not adequate unless they are made part of the SIP.

control strategy that is not accounted for in the state's control strategy, the source must demonstrate that consideration of the additional emission does not affect the state's demonstration of attainment.

States must also disapprove proposals where controlling one emission point less and another more might violate a basic condition of attainment, even though total emissions do not increase. For example, particulates emitted from a stack might have a totally different and more harmful impact upon ambient air quality than road dust stirred up by trucks within the plant site.

EPA will insist on an adequate equivalency demonstration proving that the alternative emission reduction approach will result in attainment and maintenance of standards and will comply with Prevention of Significant Deterioration requirements. The greater the difference in the types of emissions to be traded, the more detailed the demonstration must be. Thus, a trade between a stack emission and a fugitive emission will require a more detailed demonstration of equivalence than would a trade between two emissions of a more similar nature, such as two closely located stacks of the same height.

This condition will apply with particular force to trades involving open dust emissions (such as emissions from roads and storage piles). It is especially difficult to ensure equivalent effects on air quality for such trades because of (1) the uncertainty in determining emission rates from open dust sources, (2) the difficulty of predicting the effectiveness of control technology, and (3) the shortcomings of air quality models for this type of source. In addition, the adequacy of modeling techniques has not been verified for certain situations. As a result, there is substantial uncertainty regarding the accuracy of some model projections, such as for the complex interaction between open dust sources and structures at industrial sites, although these techniques may be verified and improved in the future. In such situations, EPA believes that the economic benefits that might result from a reduced marginal cost of control are not sufficiently great to outweigh the risk of having trades approved that would not adequately protect air quality standards. Therefore, EPA generally will not approve any proposed alternative emission strategy based on a modeling demonstration that proposes to substitute controls on open dust emissions for reasonable controls on the more significant sources of process emissions.

Sources may use modeling demonstrations for open dust trades that do not affect the use of such process controls. These modeling demonstrations must be particularly comprehensive, and states should review them with special care. The diffusion models used for open dust demonstrations are generally more complex and more sensitive to input data than those used for stack emissions. EPA will insist on a thorough justification and explanation of the basis for all critical inputs to the emission and air quality calculations. There are a number of factors that control agencies should keep in mind when evaluating open dust modeling demonstrations.

- Control agencies should require that the best and most appropriate models be used, such as the Industrial Complex Source Model. Both annual and short-term concentrations must be examined, and particle deposition and fallout should be taken into account.
- Control agencies should ensure that the emission factors of different sources involved in trades are of equal reliability. Where they are not and a range of values is possible, the more conservative values in the range should be used. This determination should include consideration of any relative uncertainty in the effectiveness of control technology and of any expected variation in emissions with plant utilization.
- In demonstrating the adequacy of a particular mix of controls to attain the National Ambient Air Quality Standards, the modeling must use the maximum emission rates that are legally enforceable.

As an alternative to modeling, sources may demonstrate the equivalency of the trades by installing the open dust source controls and monitoring the results. In making this showing sources and control agencies should be sure that monitors are properly sited and that data are collected over an appropriate period of time.

b. *All emissions under the alternative approach must be quantifiable, and trades among them must be even.* A source that wishes to control one emission point less in exchange for controlling another emission point more must demonstrate that the trade will in fact be even. This can only be done if the emissions from both emission points (and increases and decreases in them) can be acceptably quantified and related to ambient air quality considerations. Direct measurement is preferred, although indirect quantification is acceptable if a source establishes a clear and convincing link between the emissions and other quantifiable measures, such as application rates, work practices, or equipment standards. Section IV.C of EPA's Emission Offset Ruling contains guidance on such items as operating rates, source shutdowns, and averaging times in determining whether a trade will result in equal emissions.

The test for equivalence will generally be consistent with the SIP's demonstration of attainment. Some SIP demonstrations are based on atmospheric simulation modeling, while others are based on more simplified techniques, such as linear rollback or an "example" region approach. Sources in areas where a simplified demonstration of attainment has been used may show equivalence by establishing that the overall emissions level will not increase if the alternative approach is implemented.

Where the alternative strategies involve more than one plant, EPA will always require air quality modeling to demonstrate that the increases and decreases in plant emissions will not adversely affect air quality in the area affected by the sources. Such demonstrations are described in the offset policy (see Federal Register, January 16, 1979, pp. 3274–82).

In those cases where the SIP requirements are derived through modeling, EPA will require a modeling demonstration to ensure that the trades will result in the same air quality level overall, and emissions may vary accordingly. Ideally, in all instances, total emissions levels will also be equivalent. However, more than one-for-one emissions trades may be necessary in some cases to protect ambient air quality. This could occur, for example, where stack heights are different or where emissions are so difficult to quantify or model that a margin of safety is necessary.

EPA recognizes that the Clean Air Act permits states to revise their SIPs to allow increases in total emissions. There are significant restrictions on this authority: The revised SIP must demonstrate attainment and maintenance of the standards; the requirements for reasonable further progress in reducing emissions and for attainment as expeditiously as practicable must be satisfied; and the revisions must not interfere with the Prevention of Significant Deterioration program. However, the fact that the Act does not completely prohibit SIP revisions that increase overall emissions does not lead EPA to encourage such revisions as an element of this policy statement.

In EPA's opinion there are important policy reasons to discourage SIP revisions that increase overall emissions. A growing number of serious air quality problems are now recognized as covering broad regions of the country: Ozone violations, elevated sulfates and

"acid rain," and visibility reduction. SIP revisions that permit significant increases in total emissions of the criteria pollutants can exacerbate some or all of the current wide-scale air quality problems. Therefore, EPA does not encourage by this policy, or as a more general matter, SIP revisions that result in overall emissions increases. More specifically, EPA will not approve such SIP revisions to the extent consistent with its current legal authority.

c. *The pollutants under the alternate proposal must be comparable.* Clearly, sources cannot apply trade-offs across criteria pollutant categories, e.g., they cannot trade SO_2 against hydrocarbons. Further, even within a category, pollutants that pose significant health hazards cannot be traded against less harmful pollutants. For example:

i. Coke oven particulate emissions, because of their carcinogencity, should not be traded against particulate emissions from any other source.

ii. Some criteria pollutants are also hazardous pollutants (e.g., vinyl chloride and benzene are hydrocarbons that have been designated as hazardous under section 112). Emissions of criteria pollutants that contain hazardous pollutants can be used in alternative emission control strategies subject to the following restrictions:

• *In all cases,* sources must meet applicable section 112 regulations. Except as permitted under specific NESHAPS regulations, a source may not use an alternative emission control approach to meet section 112 regulations (as discussed in Eligibility), and a source may not increase emissions regulated under section 112 beyond the levels that the applicable section 112 regulation allows. Furthermore, when new section 112 regulations become effective, sources must comply with those regulations, notwithstanding any previously approved trades.

• The emission of asbestos, beryllium, vinyl chloride, or benzene, which are listed under section 112, may be increased at one emission point (subject to the above constraints) only as long as there is a compensating decrease in the emission of *the same* pollutants at another emission point at the same location or at a contiguous location. For example, a source may increase one vinyl chloride emission as long as there is an equal decrease in another vinyl chloride emission. Since EPA believes that the limited number of pollutants it expects to list over the next several years under section 112 will be significantly more hazardous than others in the same criteria pollutant category, restraints on trading similar to those discussed above will apply when such pollutants are listed. Should EPA list a pollutant that it judges to be less hazardous than those currently listed, EPA will indicate what pollutant-specific trading restraints are appropriate. Trading restrictions will not apply to alternative emission control strategies that EPA has approved before the announcement of the trading restraints. As noted above, however, even previously approved trades may not be continued if they conflict with section 112 regulations when they become effective.

• In addition, where the hazardous pollutant is an insignificant contaminant of the emission, exceptions to the trading restraints may be appropriate. This is likely to be the case when the source is not using the hazardous material in question as a raw material or when the source is not producing the hazardous material. Control agencies should consult EPA when considering such exceptions.

• Sources may equally trade hazardous pollutants with nonhazardous pollutants in the same criteria pollutant category only in those cases where the source decreases the emission of the hazardous pollutant. For example, a source may equally trade vinyl chloride with any nonhazardous hydrocarbon if it reduces the vinyl chloride emission.

iii. EPA will closely examine the comparability of particle size distribution in particulate emission trades because fine particles disperse more widely in the air than coarse particles and stay in the air longer. Sources should also be aware that EPA is considering an inhalable particulate standard. If EPA promulgates such a standard, some alternative approaches that EPA has approved may no longer be adequate to meet new standards. Trades involving open dust sources are of particular concern in this regard.

2. *Enforcement Considerations.* If the alternative emission reduction policy is improperly carried out, it could delay compliance and impede effective enforcement. Therefore, to avoid any additional grounds for legal challenges to revised SIPs, delays in enforcement, or any weakening of the enforceability or sanctions of SIP requirements, EPA has established the following conditions.

a. *Specific, enforceable control requirements are mandatory.* EPA will approve alternative proposals only if they contain (1) enforceable, specific emissions limits (including limits on quantity of emissions or quantifiable surrogates, such as equipment or work practice standards) on each regulated emission point or (2) an easily enforceable technique for multiple emissions points. Of course, these limits must be accompanied by enforceable testing techniques, which may include specific control measures, performance measures, and performance standards. In general, the new limits must be at least as enforceable as the existing requirements. This applies with special force to alternative control strategies that involve multiple sources.

b. *Existing SIP provisions submitted under Section 110 must not be replaced.* Litigation for SIP requirements established under Section 110 of the Clean Air Act has long since run its course. In almost all cases these section 110 SIP requirements are enforceable and are being enforced. EPA will not allow these SIP provisions to be replaced by new alternative SIP requirements that are subject to litigation and that could result in a delay or lapse in enforceability. Therefore, states must incorporate any control strategy that is an alternative to § 110 requirements as an addition to the SIP, not as a replacement. This principle of coexisting old and new requirements is consistent with EPA's guidance to the states regarding the continuity of the SIPs when establishing Part D SIP revisions.[9]

It should be noted that under the "continuity of the SIPs" policy, the section 110 requirements can be replaced only if a Part D requirement is unavoidably incompatible with an existing SIP. Alternative control strategies to Part D requirements are optional. Therefore, if the original part D requirement is compatible with the section 110 requirement, but the alternative control strategy is not, section 110 SIP provisions cannot be replaced merely because they are incompatible with the alternative approach. Otherwise, sources might be encouraged to develop incompatible alternative strategies solely to avoid the consequences of noncompliance with section 110 requirements. Thus, EPA will only approve alternative strategies to section 110 requirements as additions to the existing SIPs.

c. *Compliance dates generally should not be extended.* Some sources have not yet achieved final compliance with SIP requirements that took effect several years ago. States are free if they wish, subject to the conditions in this statement, to apply the alternative approach to these requirements as well. However, that revision should not have the effect of relieving sources of the

[9] See General Preamble for Proposed Rulemaking on the Approval of SIP Revisions for Nonattainment Areas 44 FR 20373 (April 4, 1979).

consequences of such delay. To make sure of this, any such alternative requirement should have the same SIP compliance deadline as the existing requirements. Of if the new requirement allows controls that a source can adopt more quickly than those included in the existing compliance schedule, the states should consider establishing earlier compliance dates.

In some cases, it may be impossible for a source to implement alternative control strategies within the time frame allowed in the existing schedule. EPA does not have the statutory authority to extend compliance schedules solely for the purpose of implementing alternative strategies. However, EPA's statutory authority does provide for the extension of compliance schedules for Part D requirements under certain conditions. Where sources need additional time to implement the alternative approach and where they qualify for a time extension, they should apply for a time extension for their existing Part D requirements before or when they apply for the alternative approach.

d. *There will be no delay of existing enforcement actions.* Since sources may not delay compliance with existing schedules while awaiting the review of the alternative approach, states should continue to pursue enforcement actions and seek compliance with the existing SIP as expeditiously as practicable.

Further, until EPA approves the alternative proposal, all noncompliance penalties under authority of Section 113 or 120 of the Clean Air Act or equivalent state provisions will be based on the pre-alternative proposal definition of cost. Afterward, noncompliance penalties will be based on the cost of the alternative control strategy.

e. *Requirements in some court decrees should not be changed.* Control agencies in routine situations frequently obtain court decrees to ensure compliance. In these circumstances, it may be appropriate to modify court decrees if a source presents an approvable alternative approach.

Over the past few years, control agencies and EPA have devoted considerable time and effort to arrive at decrees with some important sources, often involving several plants. EPA considers such court decrees to be of critical importance in achieving air quality objective. Therefore, alternative control strategies should not be used to change the requirements specified in these existing court decrees. The only exception is the use of alternatives to remedy the failure of control strategies specified in the consent decrees to work as expected.

In the future, important sources may be involved in similar negotiations to which the states and EPA have devoted considerable resources. These sources may wish to use the alternative approach. Under these conditions, sources should be sure either to: (1) Come forward with their alternatives and obtain agreement from the control agencies that the proposal is acceptable before entering into the court decree or (2) include a provision in the decree that explicitly allows for consideration of alternatives. Otherwise they may well find that the states and EPA will be unwilling to modify the requirements of the court decree to allow the use of an alternative approach because of the amount of effort already invested to obtain a settlement. Consent decree negotiations now nearing completion should not be delayed for the formulation of alternative plans.

Conclusion

EPA believes that the alternative emission reduction approach, properly applied, will be of significant benefit to the states and to industry. We therefore encourage states to review the policy carefully, to inform sources of the options, to explain the policy's advantages and conditions of use, and to be receptive to industry proposals.

Summary of Comments

Many individuals and organizations took the opportunity to comment on the policy statement as it was proposed on January 18, 1979 (44 FR 3740). Our responses to the issues raised follow.

Innovative Technology

The Environmental Protection Agency believes that the alternative emission reduction concept will promote economic efficiency and increase innovation, since it offers plant managers an economic incentive to develop new control strategies. Some commenters expressed concern with the statement in the proposed policy which suggested that EPA could use the new control strategies developed in response to this policy as a basis for setting tighter standards in the future. They mistakenly interpreted this to mean new standards would be set regardless of ambient air quality considerations.

Under the Clean Air Act, EPA cannot limit emissions of criteria pollutants from existing sources unless this is necessary to meet the National Ambient Air Quality Standards (NAAQS) or NESHAPS. If an existing source is in an area that has already attained the standards or will attain them by the statutory dates, then EPA will not require further control. However, if a source is in an area where the State cannot make a satisfactory demonstration of attainment by the statutory date, then a source may have to meet tighter standards which may necessitate using innovative technology.

One comment suggested that EPA exempt a plant that develops an innovative control technique from any new emission limitation that may be set as a result of that technique. EPA is not in a position to do this, since it is usually the state that sets specific source emission limitations in the State Implementation Plan (SIP). However, if a state chooses to exempt a source and this exemption does not violate the statutory requirements of the Clean Air Act, then EPA will approve it.

Resource burden

In the proposed policy, the Agency specifically solicited comments on the resource burden that final adoption of an alternative emission reduction policy might place on state air pollution control agencies. In addition, EPA contacted 38 states to further explore this question. We found that the expected volume of alternative proposals and the resulting resource requirements vary widely. Some states believe they may experience resource problems because: (1) They may receive a large number of applications, including some complex ones that could take a lot of time to review; (2) processing the applications through case-by-case SIP revisions is a lengthy process, and rejected proposals may tie up resources with appeals; and (3) it may take more time and testing to determine compliance with an alternative plan than if the source used a traditional control approach.

Recognizing that some states' resource burdens may increase, the Agency has tried to incorporate safeguards into the proposed policy and has made some changes to the final policy to further reduce any additional demands on the states. EPA has taken measures to avoid overloading the state staffs with alternative approach applications that are not well prepared. First, the Agency has tried to minimize demands on state resources by specifying that the source must initiate the proposal if it wishes to use an alternative approach. EPA also encourages states to require that the source pay for all demonstrations relevant to its proposal and that the proposal be complete before the state review process begins. There are also provisions that help to screen out applications submitted for the purpose of delaying compliance. For instance, the policy does not create any new opportunities for extensions of compliance schedules beyond those

already available under existing laws. Additionally, enforcement of existing requirements continues while the applications are under review. Applicants do not qualify for stays against their compliance schedule or exemptions from noncompliance fees (unless they otherwise would under the law). It should be noted that the section 110 SIP requirements can be replaced only if a Part D requirement is unavoidably incompatible with an existing SIP. However, since alternatives to Part D requirements are optional, existing SIP provisions cannot be replaced merely because they are incompatible with the alternative approach. Therefore, alternative strategies to section 110 requirements may only be adopted as an addition to the SIP, not as a replacement.

Some states thought that enforcing an alternative approach might be more time consuming since (1) such an approach requires that the enforcement staff become familiar with the source-specific plan, as opposed to relying on knowledge of traditional means of control, and (2) there may be an increased need for testing because, under traditional approaches, states infrequently test installations whose emissions are well below their allowable limit. In some cases enforcement may be more time consuming, but we feel the differences will be small. Although states may have to initially invest some additional time to learn about an alternative approach, once familiar with the source's alternative plan, they can proceed as rapidly as before with testing and enforcement. On the other hand, some alternative approaches will require less enforcement resources. For example, alternative control strategies may lead sources to focus their control efforts on fewer emission points so that the overall frequency of testing may be reduced. In any event, if a state does believe that reviewing or enforcing a particular alternative approach would require excessive resources, the state is free under Section 116 of the Clean Air Act to reject the approach on that basis.

Some commenters requested guidance for evaluating equivalency among pollutants and means of quantifying emissions. EPA does not think a new guidance document is necessary. In general, the Agency will require the same type of demonstrations that were necessary for comprehensive SIP revisions, except where trades involve open dust source emissions, increases in overall emissions, or multiple plants. In those cases, EPA may require additional monitoring data or source-specific modeling data (these requirements are spelled out in the policy). EPA is, however, taking measures to ease any problems that might arise in implementing this policy. First, we will hold workshops around the country to explain the policy. Second, we have apppointed coordinators to answer any questions about the policy. We have also designated a contact person in each Regional office to answer technical questions. These people are listed at the beginning of this policy statement.

Clarifications

1. *Definition of terms and relationship to other policies.* In the proposed policy, some readers found that such terms as source, facility, plant, and site were unclear or inconsistent with definitions used in other EPA air-related regulations. We believe these terms are commonly understood and the precise definitions are not important since this policy is no longer restricted to a single source, facility, plant, or site.

Several commenters also asked how this policy affected Best Available Control Technology (BACT), New Source Performance Standards (NSPS), Lowest Achievable Emission Rate (LAER), and Prevention of Significant Deterioration (PSD). This policy applies only to emission limitations approved or promulgated as part of a SIP. It does not apply to BACT, LAER NSPS, or other conditions specifically required by the Act for new or modified sources. However, EPA is applying a similar "bubble" policy to some conditions for new and modified sources. (See footnote 5 of the policy.) PSD concerns are explicitly mentioned in the policy where appropriate.

One commenter requested clarification of the relationship between this policy statement and the RACT emission limitations recommended in the Control Techniques Guidelines (CTG). The policy states that it is essential to have specific limits for each of the emission points included in alternative control strategy. Under some circumstances, states must require the use of RACT in establishing these limits and must establish these RACT requirements in EPA-approved regulations. EPA published in the Federal Register (see 44 FR 53762–63) the role of CTGs in the development and approval of the state RACT regulations.

2. *Specific emission limits.* One commenter asked which emission points must have a specified emission limit if a source uses an alternative plan. The policy requires that the source specify an emission limitation only for those points actually involved in the alternative trades. For example, if a source has five emission points that emit SO2 but wants to use an alternative approach that involves only three of them, then for the purposes of this policy the source has to specify an emission limitation for those three points only. The other emission points would continue to be subject to the level of control (if any) specified in the SIP.

3. *Compliance status.* Commenters frequently misunderstood the intent of the policy regarding the restrictions on eligibility for noncomplying sources. To clarify our intent, there is a new section in the policy entitled "Eligibility." Basically, the alternative approach does not prevent those sources not now in compliance with emission limitations from ever using a bubble. Rather, the policy requires that a source agree to a legally enforceable schedule for achieving the appropriate standards in order to establish an adequate basis for considering alternative control strategies. Without such an agreement, consideration of an alternative approach can only lead to further delays in compliance. A source can apply for an alternative approach to achieve compliance after it agrees to an appropriate schedule.

Processing Alternative Proposals

1. *SIP revisions.* Some commenters suggested that EPA would not need to use a case-by-case SIP revision for alernative approaches if the state incorporated a general regulation for alternative control strategies in its SIP that EPA has approved. Instead, EPA should depend on spot audits to determine if the state is faithfully adhering to the requirements of the general SIP revision.

In response, the Agency believes that case-by-case SIP revisions are necessary for an alternative approach to be legally enforceable. The Clean Air Act requires EPA to review and process all SIP revisions, and this cannot be eliminated or delegated. Additionally, a spot audit would not be a practical means of oversight, since any errors it would turn up are not easily reversible.

EPA realizes that promptness in processing the SIP revisions is necessary if the maximum benefits are to be derived from this policy. Therefore, the Agency is committed to expediting the SIP revision process, especially for those proposals where the trades are straightforward.

There was some question concerning EPA's authority to impose conditions on the use of alternative approaches. EPA has carefully evaluated each of the conditions in this statement and is convinced that each condition is

necessary to protect air quality and is fully consistent with the Clean Air Act.

2. *Actual vs. SIP allowable emission limits.* Some existing installations may be emitting a lesser amount of pollutants than existing SIP regulations allow because, for example, they may be burning a clean fuel, such as natural gas. Several commenters were concerned that the policy would allow a source to use the difference between such a low-emitting installation's actual emissions and the SIP's allowable emissions to offset any proposed higher emissions from another installation, with a resulting increase in overall emissions from this source.

EPA's primary concerns in any alternative approach are that the trades will be equal and result in attainment and maintenance of air quality standards as demonstrated by the SIP. In those cases where the SIP's demonstration of attainment is implicitly or explicitly based on the source maintaining the actual emission level, even though that level is lower in practice than what the SIP allows, that source cannot use the difference to increase its emissions through trading. But EPA will consider alternative approaches where the SIP can demonstrate attainment using the difference between the emission levels to offset proposed higher emissions from another installation. However, states should realize if they approve such trades they will be consuming part of their margin for growth and should explicitly take that into consideration before approving the trades.

3. *Testing techniques and determination of specific emission limits.* The proposed policy stated that each emission point must have a specific emission limit, and the limit must be tied to enforceable testing techniques. Several commenters pointed out that these requirements would prevent some sources, such as those that emit Volatile Organic Compounds (VOCs), from using the alternative approach. EPA did not intend to preclude the use of quantifiable surrogate measures that would allow such sources to use the alternative approach. Therefore, the policy now states that enforceable testing techniques can include specific control measures, performance measures, and performance standards.

4. *Attainment and nonattainment.* The alternative emission reduction approach may be used in those areas currently in attainment or in areas where EPA has judged the SIP adequate to achieve attainment by the future statutory deadlines (this means use of the alternative approach is allowed for control of oxidants beyond 1982 for states that obtain an extension of the deadline, if the SIP can demonstrate attainment by 1987). The alternative approach can also be used within CTG categories in areas that fail to demonstrate attainment (see Section B.2 of the policy).

Some commenters asked what happens to the sources that are using an alternative approach if attainment is not achieved as expected in the area where the source is located. If such a situation arises, the sources may have to install more stringent controls on facilities where the requirements have been relaxed under the alternative approach because the statute requires that all reasonable control measures have to be taken in an effort to meet NAAQS.

5. *Limited review period.* A few commenters mentioned that by inaction on an alternative proposal, EPA or a state could cause a source to come into compliance late. Consequently, they suggested that the policy specify a reasonable time limit during which the state and EPA must act on the proposal.

Although EPA agrees that prompt review is needed, it does not believe it can limit this process to a specific time period. The amount of time necessary to review an alternative approach depends on many factors, such as the complexity of the proposal and the quality of the demonstration the source submits. EPA will handle the alternative approach proposals as quickly as possible, but it must have enough time to ensure that these proposals are consistent with air quality goals. The Agency will make every attempt to expedite the processing of those proposals that are straightforward. The Agency is asking the states to work with it in expediting the SIP revision process.

6. *Time extensions.* As originally proposed, the alternative emission reduction policy stated that existing compliance dates could not be extended in any case. Several commenters argued that this stipulation is unfair because in some cases it may be impossible for a source to implement alternative control strategies within the time allowed in the existing schedule. They also felt that equity requires EPA to consider delaying compliance dates in some instances, since the states can establish earlier dates where the alternative approach can be implemented more quickly than the existing compliance schedule.

EPA agrees that for some it may be difficult to implement an alternative approach on the existing schedule. This is an important reason for sources to submit their alternative proposals as early as possible. However, EPA does not have the authority to extend compliance schedules for the purpose of implementing alternative strategies. Nevertheless, there are circumstances where sources can obtain time extensions for Part D requirements under existing law.

For example, a Part D SIP submission may have established a new particulate requirement for a source with an immediately effective compliance date. Assuming that immediate compliance is not truly practicable for that source (except by shutdown), the Clean Air Act would allow a new schedule with a final compliance date no later than December 31, 1982, to be established for the source as long as the new schedule requires compliance as expeditiously as practicable and reasonable further progress is not jeopardized. An alternative emission limitation could be adopted for that source with an expeditious compliance date even though that expeditious date is later than the immediately effective compliance date for the existing SIP requirement.

The policy for alternative emission reduction approaches is not intended to prohibit sources from applying for time extensions where they would otherwise qualify for them under the law. Thus, under some circumstances sources may be able to obtain additional time to implement alternative approaches for meeting Part D requirements. Applications for time extensions should be made prior to or simultaneously with the application for the alternative strategy.

Several commenters objected to the requirement that they agree in writing not to seek stays of compliance with the existing requirement or avoidance of sanction if the alternative proposal is disapproved, challenged, or delayed. EPA no longer asks this. However, before considering alternative approaches, we will require sources to come to an agreement with the control agency regarding compliance with existing SIPs. These agreements must not contain provisions that grant the source stays or waivers of sanctions to consider an alternative approach.

There were requests for guidance in handling noncompliance penalties associated with an alternative approach. Under Section D.2. of the policy, paragraphs b, c and d deal with penalty fees. The appropriate regional contact person can answer questions that arise in conjunction with a particular application.

7. *Comparable trades.* The alternative emission reduction policy only allows trading of comparable pollutants. Some commenters said that when determining comparability of pollutants the policy must consider that pollutants within the

same criteria category may have different effects on air quality. However, other commenters were of the opinion that without any specific standards for individual pollutants within a criteria category, EPA cannot prevent trades between pollutants in the same category. EPA recognizes that pollutants in the same category may have different impacts, and will take this into consideration to the extent legally possible when reviewing proposed trades.

8. *Open dust source trades.* The proposed policy did not allow trading particulate emissions from open dust sources against particulate emissions from stacks or industrial processes. Many commenters objected to this prohibition and the reasoning that EPA used to support its decision. EPA has reviewed this issue and has decided to no longer categorically prohibit open dust trades. However, the Agency still believes it is especially difficult to ensure equivalent air quality impacts for such trades. Due to the shortcomings of air quality models for open dust sources, EPA will insist on a thorough justification and explanation of all critical inputs to the emission and air quality calculations for any proposals based on modeling demonstrations. Generally, EPA will not approve any proposed alternative emission strategy based on a modeling demonstration that proposes to substitute controls on open dust emissions for reasonable controls on the more significant sources of process emissions. EPA will accept good modeling demonstrations for trades that do not affect the use of basic controls. As an alternative to modeling, sources can propose trades without these restrictions if they demonstrate the equivalency of the trades by installing open dust source controls and monitoring the results.

9. *Hazardous pollutant trades.* Several commenters suggested that the policy should allow trades between the same hazardous pollutant. We have clarified our position on this matter and have stated that the emissions of pollutants that are currently listed under Section 112 (but not specifically regulated) may be increased at one emission point only as long as there is a compensating decrease in the emission of the same pollutant at another point. For those pollutants listed under §112 in the future, similar trading restraints will apply. However, in all cases, sources must comply with applicable Section 112 regulations and they cannot use an alternative emission control to do this.

10. *Trades between criteria pollutant categories.* Other commenters urged EPA to consider allowing trades between criteria categories if the results will be beneficial, e.g., trading a decrease in a pollutant seriously violating NAAQS for an increase in a pollutant with a minor violation. EPA cannot consider any trades involving pollutants from different criteria categories because the Clean Air Act requires SIPs to provide for attainment for every standard. EPA may not approve a revision that makes a violation worse for one standard, regardless of any offsetting benefits for another standard.

11. *Equal emissions.* There were comments that suggested that it was unduly restrictive to require trades under an alternative approach to be equal, since in some cases this is more control than is necessary to protect ambient air quality. One commenter thought that the policy should not prevent VOC sources from increasing emissions because, unlike other pollutants, they do not create a localized nonattainment problem.

EPA recognizes that the Clean Air Act permits states to revise their SIPs in ways that allow increases in total emissions from a source, a plant, or an area. But, there are significant restrictions on this authority: The revised SIP must demonstrate attainment and maintenance of the standards; the requirements for reasonable further progress in reducing emissions and for attainment as expeditiously as practicable must be satisfied; and the revision must not interfere with the Prevention of Significant Deterioration program. However, the fact that the Act does not completely prohibit SIP revisions that increase overall emission does not lead EPA to encourage such revisions as an element of this policy statement.

In EPA's opinion there are important policy reasons to discourage SIP revisions that increase overall emissions. A growing number of serious air quality problems are now recognized as covering broad regions of the country: ozone violations, elevated sulfates and "acid rain," and visibility reduction. SIP revisions that permit significant increases in total emissions of the major criteria pollutants can exacerbate some or all of the current wide-scale air quality problems. Therefore, EPA does not encourage by this policy, or as a more general matter, SIP revisions that result in overall emission increases. In particular, EPA will not approve such SIP revisions to the extent consistent with its current legal authority.

12. *Multiplant emissions trades.* Several commenters said that use of an alternative approach should not be restricted to a single plant. They said that this restriction creates an arbitrary boundary for trading emissions since the policy already requires a source to demonstrate that the alternative strategy will not harm air quality.

EPA has changed the policy to allow more than one plant in the same area to be included in an alternative emissions abatement strategy. However, EPA will require modeling (except in the case of hydrocarbons and ozone) to show that air quality will be protected.

Other Issues

1. *Worker exposure.* The Agency received a recommendation that it disapprove any alternative approach that will increase the concentration of pollutants to which any group of workers is exposed. EPA has specifically forbidden trades involving coke oven particulate emissions. In many instances emissions close to ground level, where workers are located, may have to be weighed differently than emissions from high stacks. While EPA does not have the statutory authority to specifically prohibit a trade because of increased worker exposure, we encourage states to examine this issue and avoid decisions that would increase worker exposure.

2. *Energy management.* There was a suggestion that the alternative emission policy should encourage innovative energy management approaches by providing for greater flexibility in the use of alternative fuels to meet SIP requirements. EPA feels that the alternative approach provides flexibility for fuel switching to balance emission limits, and to the extent that energy is a growing component of the cost of meeting pollution control requirements, sources will seek to minimize energy use. However, EPA does not have the authority to take into account such factors as energy savings or choice of fuel when it reviews alternative strategies.

Dated: November 29, 1979.

Douglas M. Costle,

Administrator.

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