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December 4, 1986

Part III

Environmental Protection Agency

Emissions Trading Policy Statement; General Principles for Creation, Banking and Use of Emission Reduction Credits; Final Policy Statement and Accompanying Technical Issues Document

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ENVIRONMENTAL PROTECTION AGENCY

[FRL-3085-8]

Emissions Trading Policy Statement; General Principles for Creation, Banking and Use of Emission Reduction Credits

AGENCY: Environmental Protection Agency.

ACTION: Final policy statement and accompanying technical issues document.

SUMMARY: This Policy Statement replaces the original bubble policy (44 FR 71779, December 11, 1979) and makes final revisions in an Interim Emissions Trading Policy which was published April 7, 1982 (47 FR 15076) and on which further comments were requested August 31, 1983 (48 FR 39580).

The policy describes emissions trading and sets out general principles EPA will use to evaluate emissions trades under the Clean Air Act and applicable federal regulations. Emissions trading includes bubbles, netting, and offsets, as well as banking (storage) of emission reduction credits (ERCs) for future use. These alternatives do not alter overall air quality requirements; they give states and industry more flexibility to meet those requirements. EPA endorses emissions trading and encourages its sound use by states and industry to help meet the goals of the Clean Air Act more quickly and inexpensively.

However, EPA also recognizes that without strict accounting practices and other safeguards, emissions trades may cause potential environmental harm. Accordingly, this policy provides more explicit guidance on baselines and related tests for environmental equivalence and environmental progress. It includes numerous tightenings and clarifications meant to assure the future environmental integrity of bubbles and other trading transactions.

Among other general steps, the policy states that the lower of actual or allowable emissions must usually be used as the baseline for emissions trades. Divergences from this baseline will be allowed only where the state or applicant shows that any potential increase in actual emissions will not jeopardize National Ambient Air Quality Standards (NAAQS), PSD increments or visibility protection.

General showings to this effect may be made only by establishing that allowable values were clearly incorporated in or assumed by an approved demonstration of attainment or maintenance. Specific showings to this effect may be made only in narrow circumstances described in the accompanying Technical Issues Document.

Other general matters addressed and significantly clarified by this policy include requirements for air quality modeling and approvable state generic bubble rules, additional enforcement safeguards, and additional safeguards related to bubbles involving pollutants listed, regulated or proposed to be regulated under Section 112 of the Act.

This policy also sets forth new, tighter requirements for bubbles in primary nonattainment areas which require but lack approved demonstrations that national ambient standards for healthy air will be attained. In addition to requiring lowest-of-actual-SIP allowable-or-RACT-allowable emissions baselines in these areas, use of past shutdowns, curtailments or other reductions which occurred before application for credit is essentially eliminated, and a further reduction of at least 20 percent beyond the baseline is required. Broadly speaking, sources may secure bubble credit in these areas only if claimed reductions meet these baseline and further reduction requirements; were reasonably, objectively elicited by the opportunity to trade; and are accompanied by state assurances that the trade is consistent with the state's efforts to attain the ambient air quality standard. EPA will approve bubbles which meet these requirements because they are consistent with the attainment needs of these areas and will yield a net air quality benefit. Such bubbles can produce economic savings and environmental improvement at the same time.

The policy announced today does not constitute final action of the Agency within the meaning of section 307(b) of the Clean Air Act, and therefore is not judicially reviewable. Rather, it establishes general guidance on approvable voluntary trades. EPA will implement this guidance in later rulemaking actions that will be judicially reviewable. Applicants for emissions trades remain free, following publication of today's notice, to advance the appropriateness of different trading requirements in the context of rulemaking actions on their individual trades.

EFFECTIVE DATE: This Policy Statement is effective December 4, 1986.

FOR FURTHER INFORMATION CONTACT: Inquiries regarding the general implementation of this policy may be directed to: Barry Gilbert, Office of Air Quality Planning and Standards (MD-15), Research Triangle Park, NC 27711, (919) 541-5516.

Inquiries regarding specific applications to use this policy may be directed to the appropriate EPA Regional Office (see Appendix A of the Technical Issues Document)

Inquiries regarding the development and basis of this policy may be directed to: Barry Ehman, Regulatory Reform Staff (PM-223), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 382-2727

SUPPLEMENTARY INFORMATION: Under Executive Order 12291, EPA must judge whether this action is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This action is not major because it establishes policies, as opposed to regulations, and can substantially reduce the costs of complying with the Clean Air Act

This Policy Statement was submitted to the Office of Management and Budget for review. Any comments from OMB to EPA are available for public inspection in Docket G-81-2. Pursuant to U.S.C. 605(b), I hereby certify that this action will not have a significant economic impact on a substantial number of small entities. As a policy designed to allow firms flexibility to meet previously established regulatory requirements, it will impose no burdens on either small or large entities.

The contents of today's preamble are indicated in the following outline. The outline is followed by the preamble itself, and then by the Policy Statement and accompanying Technical Issues Document.

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PREAMBLE—EMISSIONS TRADING POLICY STATEMENT

I. Introduction

Today's policy makes final the Agency's prior guidance on general principles for creating, storing (banking) and using emission reduction credits in trading actions under the Clean Air Act. This preamble responds to written comments EPA received on major issues raised by its proposed emissions trading policy statement (47 FR 15076, April 7, 1982) and subsequent request for further comment (48 FY 39580, August 31, 1983). It also explains the Agency's principal decisions on these issues.

Today's notice is the primary source of EPA guidance on existing-source bubbles, state generic bubble rules, and emission reduction banking. It replaces the original bubble policy (44 FR 71779, December 11, 1979) as well as the proposed emissions trading policy statement, which was effective April 7, 1982 as interim guidance. The notice addresses how emission reduction credits (ERCs)—the currency of trading—may be used for bubbles, as well as for netting or offsets. Netting and offsets are part of emissions trading, but are governed by EPA and state regulations for new source review.[1]

Nothing in today's notice alters EPA new source review requirements or exempts owners or operators of stationary sources from compliance with applicable preconstruction permit regulations in accord with 40 CFR 51.18, 51.24, 51.307, 52.21, 52.24, 52.27 and 52.28. Interested parties should, however, be aware that bubble trades are not subject to preconstruction review or regulations where these trades do not involve construction, reconstruction, or modification or a source within the meaning of those terms in the regulations listed above.

The policy announced today does not constitute final action of the Agency within the meaning of section 307(b) of the Clean Air Act, and therefore is not judicially reviewable. Rather, it establishes general guidance for reviewing and approving voluntarily submitted trades. EPA will implement this guidance in later rulemaking actions that will be judicially reviewable. Applicants for emissions trades remain free, following publication of today's notice, to advance the appropriateness of different trading requirements in the context of rulemaking actions on their individual trades.

Under today's notice, EPA continues to authorize use of bubbles, banks, and generic bubble rules in all areas of the country, and provides for the fair and prompt processing of bubble applications which have been pending before EPA under the 1982 policy. However, based on experience under the 1982 policy, and in order to ensure the environmental integrity of future emissions trades, today's notice significantly tightens requirements applicable to certain trading actions, particularly existing-source bubbles in primary nonattainment areas which require but lack demonstrations of attainment. It also clarifies approval criteria in ways which should make review and approval of environmentally-sound trades more rapid and predictable. Among other safeguards or safeguarding clarifications, it requires that:

* Bubbles may no longer result in any increase in applicable net baseline emissions in any area, whether attainment or nonattainment, except under stringent conditions which assure that ambient equivalence will nevertheless be achieved;[2]

* Baselines for sources participating in a bubble in any area must take into account all three factors relevant to total emissions (i.e., emission rate, capacity utilization, and hours of operation) in order to provide an accurate accounting of emissions before and after the trade;

[1] See, e.g., 40 CFR 51.18, 51.24, 51.307, 52.21, 52.24, 52.27 and 52.28.

On November 7, 1986, EPA restructured CFR Part 51 and renumbered many of that Part's sections (51 FR 40658). Because most readers will be more familiar with prior designations, today's notice contains citations based on the organization of Part 51 as it existed before this restructuring. Interested parties may use Appendix F of today's Technical Issues Document to convert today's Part 51 citations to the corresponding new ones.

[2] This change constitutes a significantly more stringent definition of what may be considered a bubble under the Emissions Trading Policy. Specific ambient tests which must be met to qualify for an exception from this restriction can be found in the Technical Issues Document, Section I.B.1.c Actions which may no longer be treated as bubbles under today's notice must be processed under general EPA criteria applicable to SIP revisions.

• Bubbles in primary nonattainment areas needing but lacking approved demonstrations of attainment must use the lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline, as described below, for each source involved in the trade;

• Bubbles in primary nonattainment areas needing but lacking approved demonstrations must contribute to progress toward attainment by providing a 20% net reduction in emissions remaining after application of the baseline above to all sources involved in the trade or, if the bubble is being processed under a state generic rule, the greater of a 20% net reduction or the percent reduction which would be required from all controllable stationary sources in that area (e.g., taking into account expected mobile source reductions and disregarding area-source contributions) in order to achieve attainment;

• Bubbles in attainment areas and nonattainment areas with approved demonstrations must use the lower of actual or allowable values for each of the three baseline components, unless allowable values higher than corresponding actual values are clearly used or reflected in the demonstration or otherwise shown not to jeopardize ambient standards, PSD increments or visibility;

• In all areas, emission reductions must be made state-enforceable in order to qualify as ERCs and be deposited in an EPA-approvable bank;

• In all areas, bubbles must meet more stringent tests for ambient equivalence, including additional ambient significance levels, more protective air quality modeling requirements, and more conservative definitions of *de minimis* trades;

• In all areas, the total of any incidental emissions of hazardous or potentially hazardous air pollutants associated with a criteria pollutant in a bubble trade must remain equal or be decreased, whether such hazardous pollutants have been regulated, proposed for regulation, listed, or the subject of a notice-of-intent-to-list under Clean Air Act 112;

• States must provide assurances to EPA that bubbles submitted for EPA approval in primary nonattainment areas needing but lacking approved demonstrations are consistent with the state's SIP-planning and attainment objectives. For generic rules, the state must make certain assurances in conjunction with its submittal of the generic rule to EPA, and certain additional assurances with the state's proposed and final approval of each individual bubble under that rule;

• Bubbles in such primary nonattainment areas may not use credit from reductions made before application to bank or trade such credit;

• Where sources in such areas seek to bank credits in the future, "application to bank," for purposes of evaluating credits for use in bubbles, means the time of filing an application to make the proposed credits state-enforceable through or concurrent with use of a formal or informal banking mechanism;

• Bubbles must not impede compliance or enforcement (e.g., the policy states that compliance extensions may no longer be granted under generic rules in any nonattainment area, and that bubble applications do not *per se* suspend underlying SIP limits or defer source obligations to achieve those limits);

• Generic rules in all areas will be subject to increased EPA oversight, including EPA participation in the state's public notice and comment process prior to state approval of individual bubbles, subsequent reviews of individual generic approvals, and reviews of the general implementation of the rules themselves, in order to assure that approved rules are being properly implemented; and

• EPA or state notices of proposed and final bubble approvals, in all areas, must clearly indicate any changes in actual as well as allowable emissions at all sources involved in the bubble, so the ambient effects of these trades may be known.

These and other changes announced today will generally be applied to all SIP revision bubbles and state generic bubble rules that have not been approved by EPA as of this date.[5]

On June 25, 1984 the Supreme Court unanimously ruled that EPA may allow states to use a single, plantwide definition of "stationary source" for new source review (NSR) purposes in nonattainment areas as well as attainment areas, provided use of that definition would not interfere with attainment and maintenance of national ambient air quality standards (NAAQS).[6] Under the "plantwide" definition, increases and decreases occurring anywhere on plant property from emission units within the same two-digit SIC code are generally eligible for netting,[7] and may be used to balance each other without triggering preconstruction permit requirements for major new sources or modifications, so long as actual plantwide emissions would not significantly increase.

States and sources considering the use of netting should, however, be aware that applicable New Source Performance Standards (NSPS), preconstruction review requirements under 40 CFR 51.18 (a)–(h) and (i), NESHAPS, and SIP limits continue to apply to such modifications. EPA is currently developing guidance for states that wish to adopt a plant-wide definition of "source" for nonattainment areas into their new source review regulations.[8]

Pending or future litigation or rulemaking, particularly final resolution of the settlement agreement arising from the industry challenge to ERA's 1980 promulgation of revised NSR rules (*Chemical Manufacturers Association* v. *EPA*, No. 79–1112, D.C. Cir., February 1982), may alter aspects of this policy, especially regarding certain transactions under EPA new source review regulations. See 48 FR 28742 (August 25, 1983) (proposed revisions). However, unless and until EPA finally revises the relevant regulations, the current requirements remain in effect.

II. Major Issues

A. Baselines

The baseline for a given source is that level of emissions below which any additional reductions may be counted (credited) for use in trades. Questions relating to appropriate bubble baselines for particular emitting sources or types of sources in nonattainment areas generated the principal issues resolved by today's notice. EPA's resolutions strengthen SIP integrity and states' ability to make progress toward attainment by (a) identifying more

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[5] See, however, discussion of "pending bubbles" in Section I.G. of today's Policy Statement and Section I.A.1.b(4) of today's Technical Issues Document.

[6] *Chevron U.S.A., Inc.* v. *Natural Resources Defense Council*, 104 S. Ct. 2778, 14 ELR 20507, overruling *Natural Resources Defense Council, Inc.* v. *Gorsuch*, 685 F.2d 718, 12 ELR 20942 (D.C. Cir. 1982).

[7] SIC Code means codes described in the Standard Industrial Classification Manual, 1972, amended 1977 (U.S. Government Printing Office, stock numbers 4101-0066 and 003-005-00176-0, respectively).

[8] Many states currently employ the so-called "dual definition" of "stationary source," under which both the plant and each emitting piece of equipment within it are "stationary sources." Under this definition, when any individual piece of equipment is large enough in terms of potential emissions to be defined as a "major stationary source," only increases and decreases in actual emissions from that individual unit are eligible to "net."

While the plantwide definition provides greater opportunity for netting in general, netting is also allowed under the dual definition. Indeed, where no individual piece of emitting equipment is a "major stationary source," the "dual definition" allows the same opportunity to "net" as the "plantwide" definition.

precisely the three factors which must be addressed in calculating baseline emissions; (b) reaffirming that for bubbles in nonattainment areas with demonstrations of attainment that have been approved and not subsequently found by EPA to be substantially inadequate to attain ambient standards, the baseline must be consistent with assumptions used to develop the area's demonstration or must otherwise be shown by appropriate ambient dispersion modeling to protect air quality standards; and (c) specifying a number of special "progress" requirements for bubbles in primary nonattainment areas needing but lacking approved demonstrations of attainment, including stringent new baseline requirements, a ban on the use of reductions produced before application to bank or trade, and a mandatory extra reduction of at least 20% beyond applicable baseline emissions. Together with tightened criteria for modeled demonstrations of ambient equivalence, a well as other new requirements for bubbles, banks, and generic rules, these resolutions will assure continued environmental progress through trades.

1. Determining Baselines—General Guidance

A source's baseline emissions are calculated by multiplying three factors: the source's *emission rate* (usually expressed as emissions per quantity of production or throughput); its *hours of operations* or hourly usage over some representative time period; and its *capacity utilization* (e.g., the units of production per hour of use).[7] All three factors must be addressed, since a source's emissions for a given period may vary widely despite a constant emission rate, depending, for example, on whether it is operated at low capacity for a small number of hours or utilized near full capacity for a large number of hours. The product of this baseline calculation is generally expressed in pounds of emissions per day or tons of emissions per year (TPY), or both.

Today's policy clarifies EPA's original intent regarding appropriate methods for determining these three baseline factors. In general, in nonattainment areas with approved demonstrations, a source's baseline emissions for bubble purposes must be calculated using the lower of it actual emission rate or allowable emission limit, plus the lower of its actual or allowable capacity utilization and hours of operation. That is, baseline emissions in these areas must generally be calculated using lower of actual or allowable values for all three baseline factors.[8]

Actual values for these factors are based on some representative historical time period (generally the average of the two years preceding the source's application to bank or trade).

However, where the state or applicant shows that the SIP, a source-specific preconstruction permit, or an equivalent document clearly assumes or specifies allowable values which are higher than corresponding actual values for one or more baseline factors, and that document post-dates the baseline inventory year for a SIP's attainment demonstration, these values may replace actual values for calculating the bubble baseline. Where only one value (typically the emission rate) is specified, the other two baseline factors must generally be based on actual levels.[9]

Such showings must be based on either data from the SIP or data used in SIP preparation.[10] Applicants may alternatively perform appropriate modeling to demonstrate that use of allowable values which are higher than actual values will not delay or jeopardize attainment and maintenance of ambient standards, protection of PSD increments, or visibility. Upon either type of showing, these allowable values may be used.[11]

This approach is required because control of existing sources through approved SIP measures is the Clean Air Act's principal mechanism for timely attainment, and because many approved demonstrations either do not contain stated assumptions regarding all three baseline factors, or were based on combinations of actual and allowable values for these factors. It recognizes that bubble baselines must accurately reflect the SIP assumptions for all three baseline factors in order to maintain SIP integrity.

Under this approach, determination of bubble baselines consistent with approved demonstrations is a sequential, tiered process. That process was implicit in both EPA's 1982 policy and its 1983 request for further comment, as well as actual practice in bubble actions under those notices. EPA is making it explicit in response to concerns that "paper trades" might undermine attainment demonstrations because approved SIPs do not always state all assumptions on which their demonstrations rely. By requiring that unstated or ambiguous values for all baseline factors *be resolved in favor of lower actual values*, today's notice provides additional assurance that bubbles in nonattainment areas with approved demonstrations will not threaten ambient standards, PSD increments, or visability protection.

2. Comments on Baselines in Nonattainment Areas With Approved Demonstrations of Attainment

Comments on baselines in these areas indicated wide disagreement over where EPA require states to set this baseline level. The 1982 policy noted that "In nonattainment areas with approved demonstrations of attainment, the baseline must be consistent with assumptions used to develop the area's SIP." That policy generally required that where approved SIP demonstrations relied on *actual* emission levels at particular sources, those actual levels would have to be reflected in bubble baselines. Where SIP demonstrations were based on *allowable* emissions, the 1982 policy authorized baselines reflecting such allowable levels, despite the fact that some sources' actual emissions are currently or historically lower than their "allowables."[12]

[7] For detailed discussion of baseline emissions and baseline factors, see Technical Issues Document, Appendix B.

[8] Netting and offset transactions are governed by EPA's regulations at 40 CFR 51.18, 51.24, 51.307, 52.21, 52.24, 52.27 and 52.28. Accordingly, this discussion of baseline applies only to bubbles.

[9] See Section I.A.1 and Appendix B of today's Technical Issues Document for further details on baseline calculation.

[10] This could include documentation such as the demonstration calculations themselves, accompanying materials, or affidavits from those who constructed the demonstration.

[11] Use of such higher allowable values which must be justified by modeling because they are not shown to be clearly reflected in or assumed by the demonstration or an equivalent document, would require such bubbles in nonattainment areas with approved demonstrations to be processed as SIP revisions, since Level III modeling would be required for their justification under today's modeling screen. In addition, the SIP's reasonable further progress (RFP) calculations would generally have to be revised.

The principal difference between use of such higher allowable values in these nonattainment areas and in attainment areas is that in attainment areas, ambient evaluations more limited than Level III modeling may justify use of such allowable values. However, for bubbles processed as case-by-case SIP revisions in attainment areas, the Region retains discretion to require additional technical support, where limited air quality dispersion modeling is proposed to justify use of such allowable baseline values. See Section I.A.1.a. of today's Technical Issues Document.

All bubbles in attainment areas relying on allowable values not used or reflected in an approved demonstration must be evaluated for ambient impact based on a comparison of before-trade actual emissions and post-trade allowable emissions (i.e., the "worst case"), in order to assure that any potential increase in actual emissions are identified and that their effects are consistent with applicable Clean Air Act requirements. See today's Technical Issues Document, Section I.A.1.a.

[12] See n. 13 below.

The great majority of commenters supported this SIP foundation for trading baselines, noting that SIPs are the cornerstone of the Act's approach to air quality management. These commenters also asserted that regardless of sources' actual emissions, measuring reductions from allowable levels assumed in a valid SIP demonstration was entirely appropriate for use in trading, since the area would still attain ambient standards in a timely manner. See, e.g., 48 FR 39582 (August 31, 1983).

However, other commenters asserted this approach was either "too loose" or "too tight." The first group stated that credit should only be granted for reductions below current actual emissions, provided actual emissions met applicable SIP limits.[13] They advanced various reasons for this position, including assertions that reliance on past reductions, while consistent with approved plans for attainment, might not comport with "broader" clean air goals. Some felt that SIPs were insufficently precise to serve as a basis for trading.

A second group of comments went in the opposite direction, asserting that baselines should always be maximum allowable source emissions, regardless of assumptions used in SIP development. These commenters noted that emission *rates* (e.g., emissions per volume of throughput or unit of production) specified in SIP emission limits are generally the only enforceable limits applicable to existing sources. Since existing sources can legally emit up to annual levels equivalent to maximum output and round-the-clock operations so long as they meet these SIP emission-rate limitations, these commenters reasoned, companies should receive credit for agreeing to binding limits on output or hours of operations which forgo such production flexibility.

Today's notice responds in two principal ways to these concerns. First, it clarifies the components of baselines, how these are to be determined, and who bears the burden of demonstrating that a proposed baseline is consistent with a particular SIP. Several comments indicated that confusion related to the determination of baselines may have generated unnecessary concern over use of allowables baselines under approved SIPs. Second, it reiterates and further supports EPA's position that *where SIP demonstrations are approved as adequate*, the Clean Air Act simply requires trading to be consistent with assumptions used to develop the area's SIP.

3. EPA's Resolutions on Baselines in Nonattainment Areas With Approved Demonstrations of Attainment

Where a state has demonstrated it will attain an ambient standard, and EPA has approved the demonstration and not subsequently found it substantially inadequate to assure attainment, bubbles relying on baseline levels used or reflected in that demonstration amount to routine SIP revisions. The state then has discretion to maintain its demonstration through any alternative combination of emission reductions, so long as these are adequate for attainment and maintenance of the ambient standards. Since EPA cannot require states to do more than demonstrate timely attainment and maintain ambient standards, EPA will approve such trades as long as they are enforceable and do not undermine the demonstration. See, e.g., *Train* v. *NRDC*, 421 U.S. 60, 79–80 (1975); *Union Electric Co.* v. *EPA*, 427 U.S. 246 (1976). This means that credits must not be doubled-counted, that they must be calculated from a baseline consistent with the approved demonstration, and that tests of air quality equivalence to the original SIP emission limits must be met.

In short, under the Clean Air Act an approved attainment demonstration creates a legal and logical boundary. The state has met its statutory responsibility and can substitute reductions not relied on in the SIP for those assumed by the SIP, so long as air quality impacts are equivalent. This holds true for all types of emission reductions—whether derived from process changes, extra pollution control equipment, improved operating or maintenance procedures, or other actions—as long as the substitute reductions have not been relied on in the approved SIP.[14]

EPA accordingly reaffirms the general principle that states may grant sources credit for reductions below levels assumed by approved demonstrations. This generally means that where actual values for emission rate, capacity utilization and hours of operation form the basis for an approved demonstration, sources proposing a bubble must use the lower of actual or allowable values for those factors in calculating baseline emissions, and that where an approved demonstration was based on allowable values which are higher than corresponding actual values for any of these baseline factors, those allowable values may be used for such factors in calculating the baseline.

B. Baseline and Other Requirements for Bubbles in Primary Nonattainment Areas Which Require But Lack Approved Demonstrations of Attainment

EPA's 1982 policy proposed two baseline mechanisms for bubbles in primary nonattainment areas needing but lacking approved demonstrations of attainment. These areas needed additional emission reductions to attain national ambient health standards, but had not yet fully determined what amount of reductions would be necessary for attainment or which sources would be required to produce them. Nevertheless, that policy said, states could allow existing sources in these areas to trade on an interim basis, either (1) by using baselines reflecting Reasonably Available Control Technology (RACT) provisions which EPA had already approved, or (2) where EPA had not yet approved general state RACT provisions, by using "negotiated RACT" baselines agreed to between the source, the state and EPA.[15] Both the 1982 policy and subsequent notices advanced detailed programmatic and environmental rationales for this approach, including the fact that RACT was the Act's most stringent general requirement for existing sources in nonattainment areas; that appropriately determined RACT baselines were consistent with current attainment needs; and that trades using such baselines could produce faster interim progress by providing incentives for sources voluntarily to define RACT, disclose better emissions or ambient data, or take other steps to do more than the minimum required. See, e.g., 47 FR 15076, 15080–81; 48 FR 39582–83, 39585.

Many commenters on the 1982 policy approved this "negotiated RACT"

[13] The 1982 policy assumed, but did not specify, the components of "actual" emissions, such as capacity usage or number of hours of operation of a particular source. It also assumed, but did not expressly require, that actual emission levels must be reduced to compliance levels before further reductions were eligible for credit.

[14] It also holds true where the Agency may suspect, but has not formally indicated, that a previously approved SIP demonstration is no longer adequate to assure timely attainment. For reasons of policy continuity, regulatory predictability and fair notice, until EPA makes a formal finding of SIP inadequacy, the approved demonstration controls. See Clean Air Act section 110(a)(2)(H), 110(c)(1), 48 FR 39582 (August 31, 1983).

[15] The 1982 policy also authorized limited use of higher actual (rather than RACT-allowable) baselines in certain nonattainment "extension" areas which did not then have complete approved SIPs. See 47 FR 15077, 15080 (April 7, 1982). Expiration of the July 1982 statutory deadline for submitting such SIPs vitiated this third baseline option. See, e.g., 48 FR at 39580 and n.2, 39582 and n.7, 39584–85 (August 31, 1983).

approach, finding it innovative and acceptable. However, two groups of commenters again asserted that it was either "too restrictive" or "insufficiently constrained." The first group maintained that for reasons of administrative efficiency, bubbles should be based either on existing SIP reduction requirements or on actual emissions, without the need to negotiate new source-specific RACT baselines. Since trading sources in these areas would eventually be subject to RACT requirements in any case, they reasoned, no new interim baseline should be required. In partial support of this position some alluded to the one instance in which Congress has explicitly addressed such baseline issues—its 1977 declaration that in nonattainment areas without adequate demonstrations, existing SIP limits would for the next several years be the baseline for offset transactions, which were then the only types of emissions trades.[18]

The second group asserted that no bubbles should be allowed in such areas, since regulators could not know which reductions were surplus until demonstrations were completed and approved.

In August 1983, "in light of formal comments on the [1982] Policy, the *NRDC* v. *Gorsuch* decision [since reversed] . . . and the need to further articulate the Policy's approach in this area," EPA requested further comment on certain issues relating to credit from plant shutdowns or production curtailments for use in existing-source bubbles, particularly bubbles in primary nonattainment areas requiring but lacking demonstrations. 48 FR 39580. While most comments on the 1982 policy supported continued use of such credits without further restrictions, some commenters had special concerns about shutdowns in these areas. These commenters stated that shutdowns can hasten attainment, and suggested that granting credit for shutdowns that 'might have happened anyway' might not be consistent with the Act's requirement for attainment "as expeditiously as practicable."

In the August 1983 notice EPA addressed these concerns in detail, noting that:

> . . . Unlike surplus reductions from additional pollution control or less-polluting process changes, shutdowns produce a total reduction of emissions, 100% of which might benefit air quality if credit were not allowed. Granting full or partial credit for their use in existing-source bubbles might reduce that benefit . . . at least where the source would have shut down anyway. This reasoning [reflecting a desire to avoid granting credit for reductions that may not be "surplus" because they would have occurred in any event] underlies some commenters' suggestions that credit be allowed only *if* credit were a sole or principal reason for the shutdown . . .
>
> Unfortunately the issue is not this simple. So long as it has not been double-counted and a proper RACT baseline is applied, the shutdown does contribute to air quality progress, since much less than 100% credit will be granted. Moreover, the opportunity for credit may improve air quality by encouraging early shutdown of high-polluting facilities that might otherwise be kept running, either because replacement is too expensive or to preserve credit for further plant expansion.
>
> In addition, these commenters' suggestion of a test based on subjective motive appears administratively unworkable. EPA and states would find it exceedingly difficult to evaluate or rebut source evidence that a shutdown was motivated by credit and that the shutdown facility would otherwise have operated [, e.g.,] for twenty or forty years. Thus this approach would likely result in either *de facto* approval of all such credits (undermining the reason for the test), or a burden of proof so stringent that none would be approved (penalizing sources whose shutdowns were elicited by trading). More straightforward approaches might either ban shutdown bubbles until a demonstration of attainment, or acknowledge their uncertain nature by applying a margin of safety—e.g., a requirement that such bubbles produce substantial air quality improvement—sufficient to compensate for any uncertainties and protect the integrity of current or future SIPs. 48 FR at 39583–84 (footnotes omitted.)

EPA then suggested seven specific alternatives to the 1982 policy for bubbles in these areas, including: a prohibition on bubble credit from shutdowns; a requirement of substantial air quality benefit from bubbles proposing to use shutdown credit; or a requirement of substantial air quality benefit from all bubbles, with no special restrictions on shutdown credit. In partial support of this last proposed alternative, EPA indicated the administrative benefits of avoiding special definition or treatment of "shutdowns" and "curtailments," and stated that:

> . . . Requiring substantial progress from each bubble . . . could accelerate momentum toward attainment, directly improve air quality through each trade, and provide an objective margin of safety against uncertainties associated with some individual shutdowns, while leaving to the state the task of final SIP development. It would also maintain the incentive within the [1982] Policy for industry to shut down high-polluting, economically-marginal sources . . . . The more each existing-source bubble contributes directly to accelerated air quality progress, the stronger the justification for use of surplus reductions for such bubbles in the absence of a demonstration. Moreover, requiring all bubbles to produce a substantial air quality improvement, beyond RACT baselines and RACT equivalence, could provide a margin of safety sufficient to make special treatment of shutdowns unnecessary . . . 48 FR at 39585–86 (footnotes omitted).

Thus, while the issue explicitly raised by the August 1983 notice was use of bubble credit from shutdowns in primary nonattainment areas which lack approved demonstrations, the underlying issue was use of *any* type of bubble credit in these areas. Since emission reductions have the same effect on air quality whether produced by less-polluting process changes, more efficient operation of installed control equipment, additional pollution controls, or shutdowns or production curtailments, the fundamental question was whether *all* such reductions or none of them should be prohibited or subject to special requirements when used for bubbles in these areas. That question reflected a further choice. Should EPA defer bubbles in these areas until a compete demonstration was finally approved? Or should EPA authorize continued use of bubbles, in order to secure interim emission reductions?

Comments responding to the August 1983 notice were essentially the same as earlier ones. A large majority of industries and state pollution control agencies commenting at that time supported continued opportunity for bubbles (including those using credit from shutdowns) in nonattainment areas with or without approved demonstrations. Virtually all industries and states commenting with respect to areas that *have* approved demonstrations supported continued use of the 1982 policy, without change.[19] Of 13 state agencies commenting with respect to areas that *do not have* approved demonstrations, ten urged that shutdown credits be retained for these

[18] See, e.g., Clean Air Act Amendments of 1977, section 128, codified at 42 U.S.C. 7502 note; 3 *Legislative History of the Clean Air Act Amendments of 1977*, pp. 537, 713; 44 FR 2374–75 (January 16, 1979). This Congressional mandate was largely superseded by eventual state adoption of supervening SIP limits. Under current EPA regulations such SIP allowable emission rates may ordinarily be used to compute the baseline for offsets only where an approved SIP demonstration used inventoried allowable emissions in its demonstration of reasonable further progress. See Clean Air Act 173(1)(A), 42 U.S.C. 7503(1)(A).

[19] E.g., Allegheny County (PA) Health Department, Bureau of Air Pollution Control, Air Pollution Control District of Jefferson County (Louisville), KY. Cf. Dayton (OH) Regional Air Pollution Control Agency. See also, e.g., comments of Chevron USA.

areas as well.[18] However, many comments also supported or acknowledged the appropriateness of a requirement for a net air quality benefit—in the range of 20% extra reductions in emissions remaining beyond a baseline reflecting RACT emission limits—from each bubble, so long as that requirement was objective and easily administered.[19] To the extent they addressed this issue, these comments generally opposed efforts to test bubbles by examining the subjective motives underlying reductions.[20] Two state of local agencies asked that bubbles be prohibited in these areas until complete demonstrations were approved by EPA.

Several commenting environmental groups asserted that EPA should not permit any bubbles in nonattainment areas lacking adequate demonstrations. One argued that EPA cannot determine that emission reductions are "surplus," and therefore creditable, in these areas because to do so would violate the statutory requirement to attain standards "as expeditiously as practicable." Moreover, this group claimed, using RACT as a baseline would not solve this problem because RACT limits are minimum measures, not a substitute for a SIP providing timely attainment. This group also asserted that crediting shutdowns would conflict with states' duty to meet air quality standards "as expeditiously as practicable" because, by "resurrecting" emissions that have already ceased, it would accomplish less emission reduction than is practicable within a given period of time. Another group asserted that allowing shutdown credits in these areas would strain efforts to progress toward attainment. One environmental group went a step further and urged that opportunity for bubbles be restricted solely to attainment areas which have already met national air quality standards.[21]

At the same time, comments filed on Federal Register proposals to approve individual bubbles as SIP revisions under the 1982 policy [22] raised related issues. Several of these proposed bubbles were also located in primary nonattainment areas which required but lacked approved demonstrations. The issue raised related to bubbles of two types: (1) Those which relied on reductions from shutdowns that occurred long before any application to bank or trade; and (2) those which relied on extra reductions produced by routine installation of required control equipment, long before application to bank or trade. Both types of bubbles raised the larger question of whether SIP integrity and environmental progress might better be assured in primary nonattainment areas which require but lack approved demonstrations of attainment by allowing no bubble credit, or allowing bubble credit only for reductions beyond actual emission levels already achieved *as of the time sources applied to bank or trade.*

The final policy strikes what EPA believes to be a reasonable, environmentally-sound balance between all these views, and establishes numerous tightening clarifications and new requirements to implement that balance. These changes and the rationales supporting them are set forth below.

1. EPA's Resolutions Regarding Baseline and Other Requirements

In primary nonattainment areas which require but do not, at the time of a bubble application, have EPA-approved demonstrations that ambient health standards will be attained, bubbles will generally be approved if they do not rely on reductions which occurred before application for credit; if they meet other criteria for baselines, ambient equivalence, and consistency with future planning efforts; and if they produce at least a 20% net reduction in emissions remaining after appropriate baselines have been applied. These objective tests both respond to previous comments on certain individual bubble applications, and go substantially beyond alternatives discussed in EPA's August 1983 notice. At the same time they assure greater predictability and ambient progress, without imposing so heavy a burden on voluntary bubble transactions that the environmental benefits of such trades are forgone. They reflect the general principle that because such properly-structured bubbles provide continuing incentives for sources to deliberately overshoot regulatory marks (rather than plan merely to meet them), bubble trades in these areas can produce interim progress beyond current SIP requirements, and should be approved.

a. *Specific "Progress" Requirements.* Applications for existing-source bubbles in primary nonattainment areas which require but lack approved demonstrations of attainment will be deemed to produce a net air quality benefit and will be processed for approval if they:

(i) Use "lowest-of-actual-SIP-allowable-or-RACT-allowable" emissions baselines. Such baselines must be calculated using

- Either the actual emission rate, the SIP or other federally enforceable emission limit, or a RACT emission limit, whichever is lowest, for each source involved in the trade. This baseline factor shall be determined as of the time of the source's application to bank or trade, whichever is earlier.
- The lower of actual or allowable capacity utilization and hours of operation for each source involved in the trade. These baseline factors shall generally be based on the two years of operation preceding the application to bank or trade, unless another two year period is shown to be more representative of normal source operations;

(ii) Meet the general *ambient* equivalence tests outlined in today's policy (see Section I.B.1.b of the Technical Issues Document) using the baselines described above and, for the post-bubble case, emission levels that reflect overall *emissions* equivalence; and

(iii) Produce a substantial net reduction in actual emissions—i.e., a reduction of at least 20% in the emissions remaining after application of the stringent new baselines described above. (A reduction of greater than 20% may be required for bubbles approved under generic rules in some of these nonattainment areas. See discussion in Section III.A.1.(d) of this Preamble, below.)

With respect to sources which seek to bank emission reductions after publication of today's notice, "application to bank," for purpose of evaluating credit for use in bubbles, means the time of filing of an

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[18] E.g., Memphis Health Department; Colorado Dept. of Health, Air Pollution Control Division. Cf. comments of Illinois EPA.

Many industrial commenters also asserted the importance of continuing to allow shutdown credits in these nonattainment areas. See, e.g., Chevron USA; Champlin Petroleum.

[19] E.g., Bay Area (CA) Air Quality Management District. See also Southern California Gas Co.

[20] E.g., Massachusetts Department of Environmental Quality Engineering; South Coast (CA) Air Quality Management District.

[21] In oral or written submissions to the Administrator made in early 1986 while final decisions on today's policy were still pending, representatives of seven states and the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officers (STAPPA/ALAPCO) similarly urged that bubbles no longer be authorized in primary nonattainment areas until a complete attainment demonstration was submitted or approved. This position was generally echoed by a coalition of environmental groups. Since this position and related underlying issues had been raised and anticipated at length by earlier comments, it is addressed as part of the Agency's final response below.

[22] Cf., e.g., Union Carbide Corp. (Texas City), 47 FR 21508 (May 19, 1982); B.F. Goodrich (Avon Lake), 49 FR 4798 (February 8, 1984).

application to make such reductions state-enforceable through or concurrent with use of a formal or informal banking mechanism. However, in order to avoid needless disruption and inequitable retroactivity, this definition does not apply to reductions which sources have previously applied to bank. See Section I.A.1.b.(1) of the Technical Issues Document.

b. *Additional "Progress" Requirement: State Assurances.* In concluding that properly-structured bubbles as defined above can produce valuable interim progress in primary nonattainment areas which require but lack approved demonstrations, EPA also considered whether other showings might be necessary to assure that individual bubbles do produce such progress. The Agency has concluded that few such showings, whether bubble-related or otherwise, are practicable or workable. It did, however, conclude that certain representations meant to assure each bubble's consistency with SIP planning goals, by requiring states to take a meaningful look at such consistency in each bubble approval, would help assure that progress is achieved.

Under circumstances detailed in the final Policy and Technical Issues Document, today's notice therefore requires the appropriate state authority to provide the following written assurances to accompany each bubble which is approved (either directly by EPA as a case-by-case SIP revision, or by states under an EPA-approved generic rule) in these areas:

1. The resulting emission limits are consistent with EPA requirements for ambient air quality progress, as specified in today's notice.

2. The bubble emission limits will be included in any new SIP and associated control strategy demonstration.

3. The bubble will not constrain the state or local agency's ability to obtain any traditional emission reductions needed to expeditiously attain and maintain ambient air quality standards.

4. The state or local agency is making reasonable efforts to develop a complete approval SIP and intends to adhere to the schedule for such development (including dates for completion of emissions inventory and subsequent increments of progress) stated in the letter accompanying the bubble approval or in previous such letters.

5. The baseline used to calculate the bubble emission limits is consistent with the baseline requirements in the Emissions Trading Policy Statement and Technical Issues Document.

Such assurances need not be verified by, e.g., detailed quantifications, comparison with year-by-year progress projections, or showings that all reductions needed for area-wide progress or attainment have been identified and targeted for regulation. They are, however, expected to be based upon meaningful review by the state and to be consistent with the documentation supporting the bubble. EPA will not second-guess such state representations, provided they are a substantial test applied by the state to each bubble and the state has explained how the proposed bubble is consistent with the area's projected attainment strategy. Nor will EPA examine, or expect states to examine in making such representations, any specific source's subjective motivation in making claimed reductions. The combined effect of these requirements will be (a) to deny bubble credit for reductions which occurred before application for credit, in recognition of the fact that reductions produced before any application to bank or trade are unlikely to have been elicited in any way whatsoever by the opportunity to trade; (b) to help assure that only actual reductions in current emissions are relied upon to satisfy pending control requirements in these areas; (c) to more systematically encourage efforts by sources to produce and permanently maintain these additional reductions, by granting them predictable bubble credit where specified baseline and other tests have been applied; and (d) to assure that these bubbles will not interfere with these areas' attainment efforts. Any other approach would enmesh EPA and state agencies in lengthy, resource-intensive, and uncertain efforts to determine subjective company motives for making particular claimed reductions—efforts which appear unlikely to provide greater environmental protection than the criteria articulated here. Cf. e.g., 48 FR at 39584 and n. 15, 39585–86.

2. Basic Rationale

EPA believes that Congress would clearly have intended the Agency to approve bubbles that, despite the lack of a complete attainment demonstration for the affected areas, nevertheless produce progress toward attainment in those areas. Section 172(b) of the Clean Air Act does require states to formulate complete control strategies to attain the standards in these areas as expeditiously as practicable and, in the case of primary standards, by certain fixed dates. It also requires these areas to demonstrate reasonable further progress toward attainment in the interim. However, SIPs and attainment demonstrations are composed of dozens, if not hundreds, of regulations and commitments adopted at the state or local level, following proceedings that often are time-consuming and overlap in sequence. If EPA were to wait until every such provision were adopted and submitted by the state before acting on any of them, substantial environmental benefits that would otherwise accrue from having each available requirement promptly incorporated in a binding manner into the SIP and made federally enforceable would be forgone. Such an "all or nothing" approach would produce less expeditious progress toward attainment than a combination of (a) EPA approvals of state provisions submitted sequentially and (b) appropriate use of sanctions authorized by the statute to effect the adoption and submittal of remaining necessary provisions. Given the strong emphases in the statute as enacted, it is doubtful that Congress would have intended the former, less progressive approach.[23]

For these reasons, EPA has decided to approve in these areas bubbles which individually produce progress, both beyond preexisting plan requirements and in the air itself, and which do not interfere with these areas' efforts to construct complete strategies that provide for attainment as expeditiously as practicable.

Today's notice accordingly disallows use in bubbles of reductions made prior to any application to bank or trade, but allows appropriate use of reductions made after such application. Where a source voluntarily proposes to make creditable reductions as part of and following a banking or trading application, the stringent lowest-of-actual-SIP-allowable-or-RACT-allowable baselines must be applied if a bubble is involved, and that bubble must meet appropriate ambient tests, using emission levels that produce overall equivalence to the emissions baseline. The "net 20%" discount in remaining emissions then applies to all sources in the bubble, and provides an additional safety margin to assure ambient progress from bubbles in these areas.[24] Finally, the state assurances

[23] See, e.g., *Chevron USA* v. *NRDC*, supra n. 4.

[24] This "net 20%" requirement is also supported by evidence indicating that for most extension area SIPs addressing ozone pollution—the most widespread remaining nonattainment health problem—a net 88% reduction (81% RACT + 20% of remaining VOC emissions) appears sufficient to produce ambient attainment, if those areas could secure such reductions from all controllable stationary sources of VOC emissions which remain after implementation of stringent controls already in place. See, e.g., "O_3 Attainment Status of 33 Areas Under Different Degrees of Stationary Source

Continued

will indicate whether approval of the bubble is likely to remove rather than enhance any important opportunities to construct complete attainment strategies.

EPA believes that bubbles meeting the special progress requirements described above will produce both progress beyond preexisting plan requirements and progress in the air. First, with respect to *preexisting plan requirements*, each bubble would achieve a net tightening of at least 20 percent. Trades that result in a permanent 20 percent reduction beyond actual emission levels (which are *already* below what the plan allows), would produce even greater progress beyond preexisting requirements. Moreover, state assurances that must accompany each bubble will help ensure that approval does not represent a step backward in the process of developing a plan providing for timely attainment.

Each such bubble would also produce net progress in the *air*, since each increment of required control forgone as a result of the trade would be more than compensated by a greater reduction which was not required, and which may reasonably be presumed to have been elicited by the trading opportunity. Neither EPA nor anyone else can prove that all reductions which occur after filing of an application for credit were elicited in whole or in part by the trading opportunity. Decisions in the real world, whether corporate or otherwise, always arise from multiple motives which are not easily disentangled, any strand of which may have "tipped" the balance toward or precipitated a particular action. However, the Agency has concluded that this presumption is reasonable. First, it is plausible that such reductions were elicited at least in part by that opportunity, especially where, as here, sources must affirmatively decide to surrender something of value and constrain purely private decisionmaking (e.g., enforceably commit to change production processes) in order to create a cognizable reduction. Second, this presumption is the sole practical alternative to the administratively difficult and uncertain approach of attempting to determine the intent and motives of source owners making these reductions.

EPA has also concluded that bubbles meeting these new requirements will not interfere with the statutory mandate that states attain standards as expeditiously as practicable. Each such bubble would produce progress in the air that, for the reasons just described, would likely not have been achieved absent the trading opportunity.[25]

3. *Additional Considerations Regarding the Benefits of Bubbles*

Individual bubbles *approved* under today's special progress requirements for primary nonattainment areas which lack demonstrations will produce progress in the SIP and in the air. Moreover, the mere *existence* of the opportunity to trade has independent progressive effects.

As some commenters suggested, lack of such demonstrations usually results from one of two general causes: Either the state does not know where or how to obtain sufficient further emission reductions, or it has identified sources of such reductions but is unable to implement new regulatory requirements because of their cost. Moreover, regulated firms may often be reluctant to disclose information that may be used to require further retrofits against them. Even where such information is obtained, it may not be sufficiently precise to allow EPA and the state to resolve remaining ambient problems. While a vigorous regulatory response remains critical in these areas, that response is likely to be hampered by the very information barriers that discouraged a demonstration of attainment in the first place. See, e.g., 48 FR 38582 (August 31, 1983).

Bubbles can help break such deadlocks over the feasibility of obtaining further reductions, by providing an incentive for plant managers to find economical ways to go beyond current regulatory requirements. The opportunity to trade may also encourage sources to come forward in order to establish the quantifiable and enforceable emission limits on which credit must be based.

Bubbles may achieve substantial reductions even without special "progress" requirements, since sources not otherwise subject to or not yet meeting RACT requirements with future effective dates in such nonattainment areas must first reduce emissions to RACT-allowable levels before they can begin to accrue credit.[26] Where modeled showings of ambient equivalence are required, bubbles may also help identify and correct remaining nonattainment problems. In addition, bubbles may help produce (a) faster compliance with RACT limits already defined in partially-approved SIPs, (b) faster RACT definitions for sources not subject to currently approved portions of SIPs, (c) incentives for plant managers to disclose uncontrolled or uninventoried sources, and (d) incentives for such managers to control emissions earlier than required. Perhaps most important, because of their potential to elicit better information on sources, emissions, control performance and ambient effects, bubbles may enhance states' ability to secure future reductions, if and when such reductions are required. For example, EPA experience has documented cases in which bubble or similar trading applications have improved federal and state air quality management capabilities by improving data on emissions, ambient impacts, and unregulated or uninventoried sources.[27]

Control" (Feb. 1984)); Letter, Richard A. Liroff, The Conservation Foundation, to Hon. Lee M. Thomas, March 12, 1986 ("The trial calculation... indicates the staff's attractiveness to the limited control possibilities available, and appears to support their conclusion about the contribution RACT plus 20 percent can make to attainment.")

[25] The Agency has determined that these conditions also apply where the post-application reduction on which the applicant relies for credit happens to be a shutdown or production curtailment. Because multiple motives sometimes affect, and can deterministically "tip," decisions to close a facility or restrict its productive capacity, shutdowns that occur after the source owner applies for credit, no less than other types of post-application reductions, may be presumed reasonably elicited by the opportunity to trade. This is particularly true because the source operator, whatever its antecedent motives, must make a deliberate decision to forgo an item of substantial value—either by surrendering its operating permit or by accepting binding production limits—in order to create credit. Since it would be administratively difficult, if not impossible, to prove or disprove that opportunity to trade was the driving force or a subjective motive behind the shutdown, such a presumption is amply justified.

[26] See, e.g., 42 FR 15077, 15080; 45 FR 79980 and n. 2; 80 and n. 7.

RACT levels are generally at least 80% or more below uncontrolled emission levels, depending on the pollutant. Where pre-trade actual emissions are higher than RACT-allowable levels this requirement directly accelerates air quality progress, since no credit can be secured for the difference.

[27] Trade applications submitted over the last several years have, among other things, helped establish and verify emissions factors for non-traditional sources, as well as provide detailed emissions profiles of such sources (see, e.g., application of Shenango Inc. and Sun Co., approved at FR 52890 (December 28, 1983)); have provided current emissions data not otherwise available to EPA through the Agency's National Emissions Data System (50 FR 25693, June 17, 1985), and have disclosed the existence of sources for at least one case an entire plant that had been wholly missed in development of the state's emissions inventory. Other applications have identified and reduced previously unsuspected threats to PSD increments, helped correct substantial discrepancies between inventoried and actual emissions, or between SIP emission limits and attainment demonstrations, and helped improve enforcement procedures in certain state programs. In addition to such case-specific examples, opportunity to trade appears to reduce traditional reasons for sources to underestimate their emissions, resulting in better inventory and planning data. For example, Massachusetts requires firms to provide data on their two years of highest emissions since the design year of the SIP, in order to establish a daily emission cap under the state's VOC bubble rule. This requirement has produced baseline data for previously unquantified emission cases for some sources.

Through all these mechanisms, bubbles can achieve substantial emission reductions and air quality planning benefits, even without special "progress" requirements.

Nowithstanding these independent progressive effects, EPA believes that it may approve bubbles in these nonattainment areas only if they meet the specific progress requirements described above and do not interfere with the affected areas' efforts to develop and implement complete attainment strategies. Such bubbles can help adjust existing inadequate regulations on a source-specific basis, help make progress toward a full approved demonstration, and help improve air quality, without "freezing" inadequate SIP requirements that are currently in place.

Accordingly, EPA has decided to approve "progress" bubbles which are consistent with the attainment needs of these areas, which produce a net air quality benefit, and which may therefore secure faster interim progress toward attainment and more rapid development of complete attainment plans.

III. Additional Policy Changes and Clarifications

Today's notice makes numerous additional changes in response to comments on and following the 1982 policy. The most important of these changes or clarifications are discussed below.

A. *Generic Bubble Rules*

Today's notice recognizes the special position of EPA-approved state generic bubble rules. Such rules may provide clearer approval criteria and may result in more rapid bubble approvals with reduced expenditure of EPA and state resources, by eliminating the need for case-by-case Federal rulemaking on each bubble as an individual SIP revision.

Today's policy affirms that states may continue to use generic rules to approve bubbles within the scope of such rules in all areas of the country, including primary nonattainment areas needing but lacking approved demonstrations of attainment. It also establishes specific procedures to ensure opportunity for public comment on individual generic actions and for regular EPA oversight of state administration of all such rules. Finally, it spells out additional "progress" requirements that new generic rules must satisfy to be approvable for primary nonattainment areas needing but lacking demonstrations of attainment.

State generic bubble rules approved by EPA as SIP revisions have independent force of law and further Congress' intent that "the prevention and control of air pollution at its source [remains] the primary responsibility of States and local governments." Clean Air Act, § 101(a)(3). EPA has approved or proposed to approve 10 such rules for 9 different states, and at least 12 others are being developed. Few approved rules currently apply to primary nonattainment areas which require but lack approved demonstrations. However, today's notice requires that all generic rules meet certain additional procedural requirements in order to assure effective EPA oversight of their administration and to identify any deficiencies in individual approvals or state implementation procedures before substantial numbers of state-approved bubbles may be put at risk. To the extent these requirements require modification of existing generic rules, they may apply to rules affecting any area, not just primary nonattainment areas which need but lack demonstrations.

Today's policy is meant to assure these rules' smooth continued operation, both now and through any future transition periods, without undermining the considerable investment states have already made in generic approaches. At the same time, the policy is designed to assure that actions under generic rules will meet the policy's substantive and procedural objectives.

Basically, *bubbles approved by states under existing EPA-approved generic rules before the effective date of this policy* will not be affected or revisited due to today's changes. Because EPA-approved generic rules possess independent validity and may only be changed upon completion of specific procedures for altering such SIP provisions (see, e.g., Clean Air Act sections 110(a)(2)(H), 110(i)), states may also *continue to approve bubbles in accord with such rules*, unless and until those rules are finally changed in response to an EPA notice requesting and establishing a specific timetable for their modification. However, in order to provide maximum assurance of SIP integrity and minimize any need for future SIP corrections, EPA expects states to assure so far as feasible that generic bubbles they approve are consistent with applicable terms of today's policy as well as their generic rules. *New or pending generic rules* must all meet the terms of today's notice.

All existing generic rules which require modification to conform to this policy must, as requested by EPA, be promptly revised. EPA will review such rules to determine their consistency with today's requirements, and will publish **Federal Register** notices identifying generic rules requiring modification. These notices will identify specific deficiencies and means for correcting them, and set forth a schedule for both submittal and EPA review of revised rules. Where states fail to resolve identified deficiencies in such rules within the prescribed period, EPA may either rescind its previous approval of the rule, or issue a notice of SIP deficiency under section 110(a)(2)(H) of the Act.

1. Substantive "Progress" Requirements

Generic bubble rules applicable to *primary nonattainment areas which need but lack approved demonstrations* must provide that all generic bubbles in these areas:

(a) Use lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baselines, as described above, for all sources involved in the trade;

(b) Grant credit only for those reductions occurring after an application to bank or trade credit (whichever is earlier) has been made;

(c) Incorporate replicable procedures which assure that all trades preapproved by EPA as meeting the rule will also satisfy applicable ambient equivalence tests (see Technical Issues Document, Section II.B.2.); and

(d) Produce an overall emission reduction at least equal to a net 20% reduction in emissions remaining after application of the above baselines, or at least equal (in percentage terms) to the overall emission reduction (in percentage terms) needed to attain in the area (i.e., at least equal to the source-by-source emission reductions that would be required for a full demonstration of attainment, taking into account "uncontrollable" stationary [e.g., area] sources and expected emission reductions from mobile sources), whichever is larger.[28] This last

[28] For example, assume air quality analysis indicates the area must decrease its base-year emissions by 45% to attain the relevant NAAQS. Further assume:

	(T)
(a) For the base year:	
Uncontrollable stationary source emissions (e.g. residential combustion sources)	2,000
Controllable stationary source emissions	3,000
Mobile source emissions	4,000
Total	10,000
Target emissions for attainment 10,000 × (1.0 − 0.45)	5,500
(b) For the projected attainment year (before adjustment):	
Uncontrollable stationary source emissions (2,000 × 1.1)	2,750
Controllable stationary source emissions (3,000 × 1.2)	3,600
Mobile source emissions	2,000
Total	8,450

determination must be submitted with the rule, and must use the same type and quality of analysis required for an EPA-approvable SIP. In no event may the overall emission reduction required of generic bubbles in such areas be less than 20% of the emissions remaining after application of the baselines specified above; and

(c) provide assurances, in conjunction with the state's submittal of the generic rule to EPA, that the state (i) is making reasonable efforts to develop a complete approvable SIP that will achieve the percent emission reduction from controllable sources described in the previous paragraph and (ii) intends to adhere to the schedule for development of such a SIP (including dates for completion of emissions inventory and subsequent increments of progress), as stated in the letter accompanying the submittal or in previous letters. EPA believes that the numerical determination and progress requirement discussed in the previous paragraph is the functional equivalent of the additional assurances described earlier in this notice (see Section II.B.1.b above) for bubbles needing case-by-case EPA approval, since bubbles meeting this requirement will produce attainment-level reductions. For that reason, EPA does not believe that it must require the state to make those additional assurances when it submits the generic rule. However, to assure that generic approvals continue to complement and do not interfere with attainment planning, EPA will require the state to include all of those assurances in or with its notices of proposed and final approval of each bubble issued under the rule in such a nonattainment area.

Generic rules meeting these requirements will assure that each state-approved bubble produces reductions at least equal to those which would be required under an approved demonstration of attainment. Their availability can also encourage states and sources to take significant further steps towards such demonstrations. Since reductions sufficient for timely attainment are all EPA can require for approval of State Implementation Plans under section 110 and Part D of the Clean Air Act, *Train* v. *NRDC, supra,* further Agency scrutiny of individual bubble reductions is not required.

2. Procedural Requirements

Today's notice includes tightened requirements designed to assure, with minimal burdens on states, that EPA's responsibility to monitor the implementation of all generic rules incorporated in SIPs (see section 110(a)(2)(A)(H)) is more efficiently and effectively carried out. EPA will fulfill this responsibility by (a) examining and commenting on, together with any other public commenter under applicable state law, the information provided for individual trades subject to proposed action under generic rules, (b) conducting reviews of individual trades approved under such rules; and (c) periodically auditing implementation of the rule itself as part of its National Air Audit System investigations of state air pollution control programs, including indepth file audits of actions under such generic rules. These activities will cover state actions of disapproval as well as approval, and will examine whether rules are being interpreted or applied within the scope of their approval by EPA.

To be considered valid by EPA, a trade approved under a generic rule must (1) be one of a class of trades authorized by the rule, (2) be approved by the state after the rule has been approved by EPA, and (3) meet all the provisions of the EPA-approved rule. State approvals which do not meet these requirements are not considered part of the SIP and do not replace prior valid SIP limits, which remain enforceable and may make such trades the subject of remedial action after due notice by EPA to the state and source.

In addition to requiring that generic rules or other state provisions assure meaningful notice *to EPA* by the first day of the public comment period on *proposed* generic actions, and immediately upon *final* generic actions, today's policy also requires that state generic rules or other state provisions provide *the general public* adequate notice and opportunity to comment, including opportunity for judicial review sufficient to make comment effective. Existing state generic rules, statutes or regulations will generally satisfy this requirement. However, some jurisdictions, for example, deny judicial review to commenters who do not possess a direct financial stake in individual permits. Such jurisdictions will have to modify their generic rule, or other provisions, to meet this requirement.

B. Bubbles Involving Hazardous or Toxic Air Pollutants

EPA reaffirms and extends its 1982 determination that bubbles in any area must not increase emissions of hazardous or toxic air pollutants. Bubbles cannot be used to meet or avoid National Emission Standards for Hazardous Air Pollutants (NESHAPs) *that have been finally promulgated* under Section 112 of the Act. Where NESHAPs *have been proposed but not promulgated* for emitting sources which are the subject of a bubble application, the proposed NESHAP will generally serve as the baseline for determining creditable bubble reductions, and the trade must produce reductions at least as great as those which the proposed NESHAP would produce, if promulgated. Moreover, no source emitting a pollutant subject to such a proposed NESHAP may exceed emissions allowed under the proposed NESHAP as a result of the trade. Where a bubble involves a pollutant which is *listed* under Section 112, but no NESHAP has yet been proposed for the relevant source category, or a pollutant for which EPA has issued a Notice-of-Intent-to-List, there must be no net increase in actual emissions of the noticed or listed pollutant.[26] In general,

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Therefore the reductions needed from controllable stationary sources are 9,450 − 5,500 = 3,950 tons/yr.

And the percent emission reduction required from controllable stationary sources to attain is

$$\frac{(3950)}{(4200)} \times 100 = 94\%$$

Thus the net overall reduction required from each generic bubble would be 94% (i.e., the reductions produced by applicable baselines (e.g., application of a RACT emission rate) plus whatever percent reduction in emissions remaining after this RACT limit is sufficient to yield the 94% total).

States that wish to avoid case-be-case SIP revisions for sources for which RACT has not yet been defined in an approved SIP provison may incorporate "presumptive RACT" values (e.g., 80% reduction for VOC) in their generic rules. Sources would than have the option of accepting these RACT values for generic bubble purposes, or negotiating different RACT values through the case-by-case SIP revison process. However, where a source involved in a trade is one for which EPA has issued a CTG, but the state has not yet adopted the CTG-specified emission rate as RACT and no RACT has yet been specified by the state for that source, the presumptive or negotiated RACT values for the trade must be at least as restrictive as the CTG-specified emission rate for that source.

[26] In some limited circumstances additional pollutants may be treated as listed pollutants. See Technical Issues Document, Section I.B.1.d.

all bubbles involving emissions of pollutants described above must use lower-of-actual-or-NESHAPs-allowable emissions baselines, and must take place within a single plant or contiguous plants.[30]

Commenters who addressed this issue divided into two general groups. One group asserted that hazardous/toxic restrictions should extend beyond pollutants currently regulated, proposed to be regulated, or listed under Section 112. These comments generally maintained that restrictions should also apply to all pollutants the Agency is "actively considering" for listing. A second group asserted that neither volatile organic compound (VOC) nor particulate emissions should be traded unless there is clear evidence that specific substances present in such VOC or particulate emissions are "relatively innocuous."

EPA has determined that for reasons of policy and administrative practicality these suggestions, while laudable in intent, should not be adopted. Bubbles are alternative means of compliance which should generally be treated no differently than other compliance strategies, provided basic SIP requirments of consistency with ambient needs, PSD increments, and interim progress are met. EPA's statutory authority to further restrict trades on the basis of hazardous substances which may be present in a particular criteria pollutant stream (e.g., VOCs) and which may be subject to a listing, notice-of-intent-to-list or proposed NESHAP, but are not as yet regulated under § 112, is limited. Generalized attempts to exercise such authority based on the presence of substances on which the Agency has taken no formal action whatever would be still more tenuous. Moreover, the inherent ambiguity of such terms as "actively considering" or "relatively innocuous" militates against such tests. States remain free to adopt further restrictions consistent with local laws and needs. However, with respect to national requirements EPA has concluded that clear decision points based on actions pursuant to the deliberative process and record evidence underlying section 112 determinations are to be preferred.

Interested parties should be aware, however, that under today's policy the Administrator reserves discretion to consider on a case-by-case basis whether bubble proposals involve pollutants which, while not regulated, listed or otherwise noticed under section 112, are regulated as toxic under other federal health-based statutes, and to require further analysis before approving such proposals.

One commenter expressed concern over the 1982 policy's use of the term "reasonably close" to indicate the distance which may be covered by bubbles involving pollutants listed or proposed to be regulated under section 112. EPA agrees this term is ambiguous, and with the exception of bubbles which affirmatively *decrease* such pollutants below the lower-of-actual-or-NESHAPs-allowable baseline, has substituted the more protective and certain requirement that such trades occur within a single plant or contiguous plants. In order to assure that such trades do not produce adverse health or environmental effects, today's notice also requires that they rely only on reductions below current actual or section 112 allowable emissions as of the trading application, whichever is lower, in pollutant streams containing a substance which has been noticed, listed, or proposed to be regulated under section 112.

Several of these provisions—notably the proposed NESHAPs baseline and source-specific proposed-NESHAPs emissions cap, the inclusion of pollutants subject to Notices-of-Intent-to-List, and the general limitation to contiguous plants and lower-of-actuals-or-§ 112-allowables baselines—represent substantial tightenings over the 1982 policy.

C. Banking Emission Reduction Credits (ERCs)

EPA-approvable emission reduction banks may allow sources to store ERCs for their own future use or use by others. Today's notice reiterates that states are by no means required to adopt banking procedures, but notes that banks may help states and communities realize important planning and environmental benefits.[31] Banks may encourage firms to create inexpensive extra reductions at earlier, optimal times (e.g., when replacing outworn control equipment or deciding how to meet new requirements) and disclose such information to state agencies. They may help create a central pool of identifiable, readily-available reductions which can ease plant modernizations or expansions, new source siting, or existing-source compliance. Properly-structured banks may reduce incentives for sources to delay, conceal or hoard actual or potential reductions until an immediate use arises. Banks may also produce other, interim environmental benefits, since banked ERCs remain out of the air (although they must be treated for SIP planning purposes as "in the air") until used. In addition, banks can help state agencies manage their permit workloads more efficiently, because portions of new source or existing-source compliance transactions may be pre-permitted or reviewed in advance. Banks may also help states systematically assure that all unused surplus reductions are treated as "in the air" for SIP planning purposes, avoiding potential inconsistencies which might cause those reductions to be lost.

Comments indicated some confusion over whether, in addition to meeting other ERC requirements, reductions must be made federally enforceable to be formally credited for banking. The answer is no. However, in order to qualify as emission reduction credits and be deposited in EPA-approvable banks, emission reductions must be made enforceable *by the state*. Reductions must be made enforceable by the state by their time of deposit in order, e.g., to better ensure the integrity of the state's air quality planning process by preventing sources from banking reductions of emissions which their permits do not preclude them from continuing to emit. This requirement will also prevent undue reliance by parties or potential parties on emission reductions which have not actually occurred.[32] However, because these

[30] The one exception involves bubbles in which surplus reductions in the emissions of pollutants subject to regulation, proposed regulation, listing, or Notice-of-Intent-to-List as hazardous emissions compensate for increases in non-hazardous emissions. (E.g., where a source decreases benzene emissions below the baseline specified above, in exchange for corresponding increases elsewhere in a non-hazardous VOC.) As long as such a trade would not result in an increase in either actual or allowable emissions of a pollutant subject to the special restrictions discussed above at any source, it would not differ in nature of requirements from a trade involving only non-hazardous emissions.

[31] See e.g., 47 FR 15003–04 (April 7, 1982).

[32] In primary nonattainment areas which need but lack approved demonstrations, emission reductions made prior to application to bank or trade (whichever is earlier) will not be credited for use in bubbles (see Section I.A.1.c.(1) of today's Technical Issues Document). Following publication of today's notice, the "date of application to bank" will be the date the source submits an application to the state to make a reduction state-enforceable through or concurrent with use of a formal bank or informal banking mechanism (see section I.A.1.b.(1) of today's Technical Issues Document).

In other areas, although emission reductions cannot qualify as ERCs or be deposited in EPA-approvable banks until they are made enforceable by the state, emission reductions banked through other formal or informal banking mechanisms which do not make reductions state-enforceable by the time of deposit will still be eligible for use in future trades, so long as those reductions are made federally enforceable at time of use and all applicable requirements of the regulatory program under which they will be used are met.

Continued

actions merely create extra reductions in actual or allowable emissions which cannot by themselves produce any adverse effects on air quality, they need not be made *federally* enforceable until used.[33] Where states wish to make banked emission reductions *federally* enforceable at the time they are banked, several mechanisms may be available for doing so without case-by-case SIP revisions. States with EPA-approved PSD, NSR, visibility and preconstruction review programs can issue permits to credit reductions from emission units currently subject to these preconstruction permits.[34] States with EPA-approved generic rules may also be able to use those rules' procedures to make reductions at existing sources federally enforceable. Since only reductions in applicable emission limits are involved at the banking stage, modeling should not be required. Moreover, these reductions should automatically meet the requirement that changes in emission limits under generic rules not jeopardize ambient standards or PSD increments.

Since some trades have special requirements, banks do not guarantee the validity of particular banked ERCs for all potential uses or for all time. For example, because only actual reductions occurring at the same major stationary source are eligible for netting, banked reductions created at other stationary sources cannot be used for netting transactions. However, banked credits resulting from reductions at other stationary sources may be used as offsets or in bubbles, so long as this notice's other requirements for appropriate use of credits are observed and applicable offset requirements are satisfied.

Because of differing regulatory requirements, the amount of credit actually derived from particular emission reductions may also differ from one regulatory program to another. For example, in primary nonattainment areas needing but lacking approved demonstrations, the amount of credit available from a given reduction for bubble purposes may be less than that available from the same reduction for netting or offset purposes, since special progress requirements apply to bubbles in these areas.

Because the *use* of credits will change (rather than merely reduce) emission levels if approved, such proposals should be carefully evaluated to assure they meet all of today's criteria for appropriate use. For similar reasons proposals to *use* banked credits will usually require additional approval procedures (e.g., additional modeling for certain TSP or SO_2 trades), whether such proposals are evaluated as case-by-case SIP revisions, under EPA-approved generic rules, or under EPA-approved new source review programs.

One commenter asked how banked ERCs would be treated if a nonattainment area is being redesignated to attainment. Redesignation will have no effect on the banked ERCs, so long as state planning considered those ERCs to be *in the air* (i.e., in the inventory) at the site of their creation. Because local recessions or shifts in industrial patterns can temporarily affect air quality without regard to the adequacy of state emission-control efforts, EPA guidance requires that redesignation not be based solely on monitored air quality. In addition to considering factors such as the state of the particular economy and its effect on emissions, EPA may consider the number, type, and state inventory treatment of banked credits. Such procedures will help assure that reliably banked reductions are not reduced or otherwise adversely affected by shifts in an area's designated attainment status.

Some commenters asserted it is overly cautious to require that *all* banked emissions be considered as "in the air." One commenter asked that state planning be required to include as "in the air" only a *portion* of banked emissions analogous to a "reserve requirement." This comment drew parallels with financial banking to assume that, given withdrawals and deposits, a certain "float" quantity of ERCs would always remain in the bank and out of the air. EPA recognizes that reductions placed in banks may tend to keep the air cleaner through a relatively constant level of deposits. However, EPA cannot allow states to consider less than their full amount of banked deposits as "in the air." To do so could jeopardize air quality planning and attainment.[35]

D. OBERS Projections and Double-Counting

In its August 1983 notice EPA asked for further comment on whether some SIPs' translation of general economic growth projections provided by OBERS (Department of Commerce) directly into projected emissions growth, left "no straightforward way to disaggregate the projections into shutdowns and new plant openings." Whether such SIP demonstrations were fully or only partly approved, the notice continued, such use of OBERS might make it impossible to distinguish which shutdowns were already relied on in the demonstration. Therefore, it might be "difficult or impossible for states whose SIPs rest on OBERS projections to grant credit from shutdowns for use in existing source bubble trades, consistent with the Clean Air Act." 48 FR 39581.

Most industry and several state commenters asserted that where OBERS data were used to project needed SIP reductions, use of shutdown credits in bubbles was not a problem, since OBERS figures substantially overestimate the total amount of emission reduction needed to attain. For example, one industry commenter noted that "emissions growth will not be directly proportional to economic growth because of the installation of new environmentally efficient technologies. Therefore, SIPs which used "OBERS" projections already have

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[33] Since states may have to revise their regulations or permit procedures in order to implement this new state-enforceability requirement, full implementation will not be expected until one year after publication of today's notice. However, all credits not made enforceable when banked during this interim period, together with all credits deposited prior to today's notice, should be made state-enforceable within eighteen months from the date of this policy.

[34] Cf. 47 FR 15076, 15081 at col. 2.

[34] Some jurisdictions may also use general state preconstruction review programs that have received EPA approval to credit reductions at existing sources if such reductions are covered under the program, since requirements under these programs are federally enforceable.

[35] In order not to defeat banking's purpose of encouraging the earliest possible disclosure and production of potential extra emission reductions, use of banked credits for bubble purposes *in primary nonattainment areas which lack approved demonstrations* will continue to be allowed, provided these credits meet all baseline and other applicable requirements of today's notice for these areas. This generally includes the lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline, applied as of the date of written application to the state to bank such reductions through a formal bank or informal banking mechanism for use in future trades. It also includes that 20% net reduction requirement and state assurances specified above, at the time such credits are approved for use in bubbles. Banked credits resulting from *plant shutdown or production curtailments* may be used for bubbles in these areas on the same terms as use of other banked credits, provided their use is subject to stringent qualitative review to assure legal, technical and programmatic consistency with SIP planning goals (e.g., avoidance of "shifting demand"). See today's Policy at n. 24 and Section I.A.1.c[3] of the Technical Issues Document. (Banked credits resulting from certain shutdowns or production curtailments may, however, be subject to special restrictions for offset purposes. See today's Technical Issues Document at n. 14).

The special restrictions discussed above do not apply under today's notice to use of banked credit for bubble purposes in other areas.

an inherent growth potential built into them, and allowing ERCs for shutdowns in these areas will not jeopardize a state's ability to demonstrate attainment." A local agency agreed that "demonstrations . . . based on such emission projections would overestimate attainment because some growth will occur from [wholly] new sources, new sources replacing existing sources, or modified existing sources, [all of] which would be subject to . . . New Source Review rules, rather than the less stringent [SIP] requirements assumed in the emission projections."

Several state commenters also stressed that while use of OBERS projections is not widespread, the underlying question is whether the area's SIP process incorporates conditions sufficient to prevent double-counting of shutdown credits. One local agency recommended that shutdown credits be prohibited where the source involved is within an industrial category projected to go through an economic downturn, asserting that in such cases the SIP implicitly relies on the expected shutdowns. An environmental group went a step further, and urged that all shutdown credits for bubbles in areas using OBERS projections be completely prohibited.

EPA has concluded that the requirements of the 1982 policy are sufficient to prevent double-counting of shutdown credits, and should be retained without further special restrictions. First, use of OBERS or any other projection is relevant only where an area has an approved attainment demonstration. Today's notice generally disallows bubble credit for pre-application reductions (including reductions from shutdowns or curtailments) in primary nonattainment areas which require but lack such demonstrations. Thus today's notice largely moots any issue of double-counting for past shutdowns, in the areas for which this issue has been raised with the greatest concern. Second, use of OBERS projections in areas with approved demonstrations does not appear nearly so common as was assumed in EPA's 1983 request for further comment. Even where such projections were used in approved demonstrations, they generally overestimate the amount of emissions forecast to exist in the year of projected attainment. They therefore tend to assume substantially less overall reductions from source turnover than will actually occur.[36]

Finally, even if such projections did not overestimate emissions, under today's notice the state must show that use in bubbles of any reductions created by shutdowns is consistent with its attainment demonstration and that those reductions were not already assumed in its SIP. For example, the state must show that it did not implicitly or explicitly rely on a "turnover rate" from the difference in emissions between existing sources and better-controlled new sources for part of the reductions required in its SIP from that industrial category. Alternatively, it must show that if a "turnover rate" was assumed, the shutdown credits used in an individual trade result from reductions in excess of that turnover rate. Where a state regulated the sources in a standard industrial classification (SIC) without explicitly relying on turnovers, then bubble credit for a shutdown within that SCI category would not in general be double-counted.[37]

These requirements should fully protect states and sources against adverse environmental or SIP effects.

E. Improved Modeling and de Minimis Requirements

Bubble applicants must show that their proposed trades are at least equivalent in ambient effect to the SIP (or other) emission limits the bubble would replace. For some criteria pollutants (e.g., VOC or NO_x) this test may generally be met by showing equal reductions in emissions.[38] For other pollutants (e.g., SO_2, TSP or CO) it was traditionally met, prior to the 1982 policy, through ambient dispersion modeling.

The 1982 policy made available several alternatives to the use of full-scale dispersion modeling where such modeling was not needed to protect air quality. These alternatives could, in appropriate, carefully-limited circumstances, be used to demonstrate ambient equivalence for bubbles involving particulate matter or other pollutants whose ambient effects were not linearly related to emissions. They included *de minimis* levels and the use of other screening criteria to identify circumstances in which full-scale modeling was unnecessary, either for bubbles processed as SIP revisions or those approved under generic rules.

Today's notice both tightens some of these screening criteria and expands the circumstances in which such criteria can be used.

Today's notice also specifies certain conditions and types of case-by-case SIP-revision bubbles for which EPA Regional Offices may require additional technical support, beyond basic modeling requirements, deemed necessary to protect NAAQS, PSD increments or visibility where allowable values used to calculate baseline emissions are not clearly used or reflected in an approved demonstration, or may not reasonably be assumed consistent with the need to protect PSD increments or visibility. See Technical Issues Document, Section I.A.1.a.

1. De Minimis Levels

Under the 1982 policy, trades in which net baseline emissions did not increase and in which the sum of emission increases, looking only at the increasing sources, totaled less than 100 tons per year (TPY) after applicable control requirements, could be exempted from SIP revisions under an approved generic rule. The rationale for this approach was that EPA regulations implementing the Clean Air Act already allow some exemptions from NSR requirements for new sources which are not defined as "major"—i.e., which do not have potential emissions greater than 100 TPY. See e.g., CAA section 302(j) and 40 CFR 52.21(b)(1) and 51.18(j)(1)(v). Thus trades which merely shift lesser amounts of emissions, and which are

[36] This is so because OBERS-based SIP projections assume that units of production (and hence emissions) in particular SIC Codes will keep pace with projected trends in earnings and/or employment in those SIC codes, without regard to changing distributions between new and existing sources. See, e.g., *1980 OBERS: BEA Regional Projections, Volume 1: Methodology, Concepts and State Data*, p. (xi), U.S. Department of Commerce (July 1981).

[37] Such credits must of course meet all other requirements of today's notice, including application of appropriate baselines and other criteria defining surplus reductions, before they may be used in a bubble trade.

States which expressly relied on OBERS projections may also show that no double-counting occurred by demonstrating that they did not implicitly rely on any turnover credits. This showing should not be difficult to make because OBERS assume that emissions will evenly increase at each plant and production line, proportionate to growth in earnings and employment potential for that SIC code. Cf. n. 36 above. This assumption neither anticipates nor relies on the fact that any shutdown will occur.

The one exception to these general principles could occur where a SIP relied on OBERS projections for an SIC category predicted to undergo a *quantified* future economic downturn, without taking explicit affirmative steps to preclude reliance on that downturn. In these circumstances the state would either have to show that a proposed shutdown credit from a source within that SIC category was not double-counted (e.g., by showing that more shutdown reductions than projected for the SIC category had already occurred), or deny credit.

[38] Interested parties should, however, be aware that ambient equivalence considerations which apply to SO_2, TSP and CO, as described below, also apply to NO_x trades involving visibility impacts from elevated plumes. See Section I.B.1.b. of today's Technical issues document.

accompanied by compensating decreases, should not be subject to more stringent requirements. As the 1982 notice put it, "Such trades will have at most a *de minimis* impact on local air quality because only minor quantities of emissions are involved . . . the Federal resources required to evaluate these trades could best be used to evaluate actions that have a potential impact on air quality." 47 FR at 15085.[39]

One commenter asserted that this 100 TPY limitation was unnecessary, since the trades to which it applied were already required to produce no net increase in emissions. However, four state and environmental commenters urged that *de minimis* levels for such trades be the same as those triggering federally-mandated review of emissions increases in PSD areas. These comments primarily noted that EPA had already defined more relevant "cutoff" levels in its regulations for PSD, for NSR preconstruction permits in nonattainment areas, and in visibility permit regulations, and that emission shifts of 100 TPY from one source to another might still be too large to go unexamined for certain types of emissions and situations.

In order to ensure prosecution of ambient air quality, today's notice adopts more protective *de minimis* levels—derived from those for PSD; NSR permits in nonattainment areas; and the visibility permit regulations—of 100 TPY for CO, 40 TPY for SO_2, 25 TPY for particulate matter, and 0.6 TPY for lead. Because of this action, state ambient evaluation of *de minimis* trades will no longer be required for generic bubble rules to be approvable by EPA.[40] Trades involving sources of substantial size may still be implemented as *de minimis* under today's provisions, as long as the quality of ERCs traded by these sources is below the levels specified above.

2. Modeling Requirements[41]

Numerous comments were received on the 1982 policy's three-level approach to demonstrating ambient equivalence. The vast majority sought added clarification, stating, for example, that the 1982 policy did "not adequately delineate the level of modeling necessary in each instance." Today's notice tightens and clarifies the conditions under which ambient equivalence may be demonstrated with less than full-scale modeling.

a. Level I Criteria. Under the 1982 document no modeling was generally required of SO_2, TSP, or similar trades where applicable net baseline emissions did not increase, sources were located in the same immediate vicinity (generally within 250 meters of each other), and the taller stack was the one which increased its emissions. These conditions were believed sufficient to assure that local ambient concentrations of the relevant criteria pollutants would not increase as a result of the trade.

EPA has added two criteria to those specified in 1982, in order to provide additional assurance that trades approved under Level I will have no adverse ambient effect. First, there must be no complex (e.g., mountainous) terrain within 50 kilometers of the trading sources or within the trade's area of significant impact, whichever is less. (For simplified methods of determining "area of significant impact," see today's Technical Issues Document, Appendix E). Second, stacks with increasing baseline emissions must be sufficiently tall to avoid downwash.

Some industry commenters objected to the 250-meter limitation, advocating use of either trade ratios for sources beyond that distance, or an 800-meter limit extrapolated from unrelated EPA regulations.[42] EPA has retained the 250-meter limit as substantially more consistent with the modeling screen's original intent of simplifying modeling requirements for trades which could not jeopardize ambient equivalence.[43]

b. Level II Criteria. Trades of SO_2, TSP, CO, Pb and NO_x (for visibility purposes) may also be approved through limited Level II modeling of the ambient effects *solely of sources involved in the trade*, where applicable net baseline emissions do not increase and designated ambient significance levels are not exceeded.

Today's notice confirms, clarifies, and in certain cases extends various 1983 improvements made to increase certainty and better assure that such Level II trades result in ambient equivalence. In particular, "significant ambient impact" may no longer be measured solely by changes at the "receptor of maximum predicted impact" before and after the trade. Instead such changes must be measured at every affected receptor for every averaging period relevant to the particular pollutant, throughout the year. Under this approach no Level II trades will be approved without further scrutiny, involving full or limited Level III modeling, if they result in a significant net ambient effect at any modeling point for any such averaging period during a modeled year.

Today's notice also specifies Level II significance levels for all averaging periods consistent with all current national ambient air quality standards, not just the 24-hour averaging periods for SO_2 and PM or the 8-hour averaging period for CO.[44] Refined models such as MPTER and ISC must generally be used to measure changes resulting from the trade at each receptor, using the most recent full year of meteorological data.[45]

These modeling requirements assure that bubbles which pass applicable Level II tests and meet all other requirements of today's policy will result in air quality equal to or better

[39] The 1982 document did, however, note that such "[generic] trades are still subject to ambient tests [at the *state* level, and] . . . should accordingly be evaluated by the state under the modeling screen . . . or an equivalent approach." 47 FR 15085 at n.7.

[40] This should not be construed to imply that new sources and modifications need not meet all applicable requirements, including those specified under 40 CFR 51.18 or parallel EPA-approved state rules.

[41] The following discussion summarizes both interim improvements made in the 1982 modeling screen (see Technical Issues Document, Appendix C) and EPA's responses to major comments on modeling issues.

[42] See e.g., 47 FR 5864, 5868 (February 8, 1982).

[43] Trade ratios may already be used under general provisions inviting states to design other equivalent approaches which adequately address ambient concerns. See, e.g., 47 FR at 15077 and n.2, 15078. However, to be approved by EPA such ratios would generally have to be defined through area-wide advance modeling of all sources, as well as those likely to trade.

Several comments also objected to the requirement that Level I trades not increase emissions from the source with the lower effective plume height. These comments noted that under various conditions similar stacks could so vary in effective plume height that neither would consistently be "higher" or "lower." One also suggested this limitation might encourage use of tall stacks to cure local exceedances.

Today's notice retains this Level I requirement unchanged. That two sources may be virtually indistinguishable in effective stack height should not delay approval of Level I trades, since the limitation's purpose—preventing potentially significant increases in ground-level ambient concentrations due to shifts of emissions from "higher" to "lower" stacks—will still be satisfied. Moreover, since such trades cannot increase net baseline emissions, this limitation merely ensures they will not create new ambient violations. Because other EPA regulations address the use of excessively tall stacks to cure *existing* ambient violations, no further restriction in this Level I requirement appears required.

[44] For further discussion of these significance levels and the increased assurance of environmental equivalence they provide in conjunction with today's more sophisticated Level II modeling approach, see Fleckenstein, "Modeling Criteria: The Key to Major Reforms for Emissions Trades," APCA Paper 84-65.2 (San Francisco, California, June 28, 1984).

[45] Under some limited conditions, conservative screening models may be substituted for these refined models, and in these cases a full year of meteorological data may not be necessary. See Technical Issues Document, Section I.B.1.b.(3).

than that produced by pre-trade emission limits, and may be approved. Because refined models have now been approved by EPA and their parameters may be specified with greater certainty and confidence, these requirements also provide a firmer basis for approving state generic rules incorporating Level II.[46]

c. Level III Criteria. Trades which are not *de minimis* and do not satisfy Level I or Level II above must generally be evaluated by full-scale ambient dispersion modeling. Two air pollution control agencies recommended fixed trading ratios in lieu of such modeling, asserting this would reduce cost and uncertainty while continuing to meet the goals of the Clean Air Act. EPA recognizes the legitimacy of these concerns but has concluded that trades which do not satisfy Level I or II raise the kinds of air quality issues which appropriately require full-scale modeling, unless such trading ratios have been justified by similar area-wide modeling conducted in advance of the trade.

Today's notice does, however, modify Level III to provide states and sources more flexibility in this regard. Where a trade meets all other criteria of Level II, but Level II modeling has shown significant potential increases at particular receptors, modeling analyses under Level III may under appropriate circumstances be limited to a receptor area smaller than the trade's entire area of impact, so long as it includes emissions from all sources which contribute to ambient concentrations in that limited geographic area. Because of the unique nature of each situation, the appropriate limited geographic area must be determined in accord with EPA guidelines on modeling and case-by-case evaluation. This "limited Level III" approach may conserve significant resources, while allowing states and sources to focus on specific geographic areas of concern.[47]

F. Enforcement Issues

Several commenters noted that while sources should, as provided in the 1982 policy, be allowed to use bubbles to come into compliance, bubble applications might also be used to delay compliance or enforcement without compensating environmental benefits. Some of these commenters alluded to language in the 1982 notice which, while not authorizing or intended to authorize such results, could have been interpreted to allow them. Such unacceptable delay might, for example, arise where a source facing an imminent compliance deadline suddenly advances a bubble application and asserts that more time is needed to develop and evaluate that application before compliance with original SIP limits should be required.

Both bubbles and generic rules can be important means of allowing environmentally-sound compliance. Generic rules may be more expeditious than case-by-case SIP revision bubbles. They may also preserve the very opportunity to bubble when the time needed to process a case-by-case SIP revision might extend beyond the source's original SIP compliance date. At the same time, bubble applications should not become a shield against enforcement actions for sources which have failed to take necessary steps to meet required control obligations on time. Bubbles are simply alternative means of complying at less cost. They should be treated neither more nor less stringently than other, more traditional methods of compliance. Bubbles offer innovative ways to meet emission reduction obligations. They should not become devices to avoid such obligations.

Today's notice substantially clarifies and tightens the 1982 policy to better implement these principles. Among other steps, compliance extensions will no longer be granted under generic rules in any nonattainment area, and may be granted generically in attainment areas only where EPA has approved the time-extension portion of the rule as consistent with relevant Clean Air Act requirements, including expeditious attainment and maintenance of ambient standards. Cf. 47 FR at 15078 col. 2. This will generally mean that requests for time extensions as part of bubble applications must be separately reviewed as individual SIP revisions, subject to criteria EPA normally applies to such requests.

Today's notice also re-emphasizes that as a matter of law and sound policy, sources seeking bubbles remain subject to enforcement of existing (pre-trade) SIP limits until the bubble is finally approved. Sources which possess approved bubbles with future effective dates remain subject to similar enforcement of pre-trade limits until either those limits or the new ones are met, and may wish to take steps identified in the notice, including accelerated compliance with bubble limits, to minimize that possibility. See Technical Issues Document, section I.B.2.a.

Under today's notice, EPA will not specifically select such sources for enforcement action. Nor will EPA withhold or defer enforcement simply because a source is seeking alternative emission limits through a bubble. In exercising its inherent enforcement discretion, EPA will apply the same considerations to noncompliant sources which seek to comply through bubbles, as to those which do not.[48]

Emissions Trading Policy Statement

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[46] Interested parties should, however, be aware that because of replicability concerns related to application of any approach requiring use of case-specific ambient dispersion modeling, such Level II generic rules may be more difficult to draft and implement than rules incorporating only *de minimis* and Level I approaches for SO_2, TSP, CO or Pb. During and after issuance of the 1982 interim policy EPA staff drafted and informally circulated, at the request of state and local air agency directors, model generic rules which provided more detail to help interested states acceptably address these concerns. The Agency plans to update and recirculate those model rules as quickly as possible after publication of today's notice. EPA encourages parties wishing to develop generic rules to use these new models and work closely with relevant Regional staff, so that potential problems may be promptly identified and resolved.

[47] Today's notice also requires bubble trades in certain primary nonattainment areas needing but lacking approved demonstrations to produce a "net air quality benefit," which shall consist at minimum of a 20% reduction in emissions remaining after application of the lower-of-actual-SIP-allowable-or-RACT-allowable emissions baselines to all sources involved in the bubble. See, e.g., Section II. B above. This requirement does not entail any modeling different than or in addition to the modeling approaches discussed above. It is merely intended to ensure that where appropriate levels of modeling indicate that prescribed baseline values are not sufficient to produce ambient equivalence, additional reductions which assure such equivalence, prior to the 20% net discount in baseline emissions, will be required.

[48] States and sources should, however, be aware that under current EPA guidance, such discretion is most likely to be exercised where a SIP-revision bubble has been formally proposed for approval at the state level and EPA staff have concluded that it appears approvable under current EPA policy. In these circumstances initiation of action to enforce pre-trade limits that would soon be replaced by a valid bubble reconfiguration would likely consume limited EPA enforcement resources to little environmental end.

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EMISSIONS TRADING POLICY STATEMENT

I. Introduction: Basic Elements of Emissions Trading

This statement details EPA policy on emissions trading. It sets out conditions EPA considers necessary for emissions trades to satisfy the Clean Air Act. It also clarifies and otherwise makes final the Interim Policy proposed on April 7, 1982 (47 FR 15076). It is accompanied by a Technical Issues Document which elaborates and provides greater detail on principles set forth below. Finally, it addresses new issues, and incorporates certain additional safeguards as a result of past trading experience, to better assure the environmental integrity of future trades.

A. What is Emissions Trading?

Emissions trading consists of bubbles, netting, emission offsets, and emission reduction banking. These steps involve creation of surplus emission reductions at certain stacks, vents or similar sources of emissions and use of these emission reductions to meet or redefine pollution control requirements applicable to other emission sources. Such emissions trades can provide more flexibility to meet environmental requirements, and may therefore be used to reduce control costs and encourage faster compliance. Moreover, by developing "generic" trading rules (see Section III below) states[1] may be able to expedite bubble approvals by eliminating the need for case-by-case SIP revisions[2] and by providing more predictable approval criteria.

B. The Bubble

EPA's bubble lets *existing* plants (or groups of plants) increase emissions at one or more emission sources in exchange for compensating extra decreases in emissions at other emission sources. Approved bubbles give plant managers the ability to implement less costly ways of meeting air quality requirements. To be approvable, each bubble must produce results which are equivalent to or better than the baseline emission levels in terms of ambient impact and enforceability. Thus, bubbles should jeopardize neither ambient standards nor applicable PSD increments and visibility requirements. Under EPA's bubble, emission reductions from existing sources can not be used to meet technology-based requirements applicable to new or modified stationary sources.

This Policy Statement replaces EPA's original bubble policy (December 11, 1979; 44 FR 71779) and Interim Emissions Trading Policy (47 FR 15076). It tightens general bubble principles as well as requirements for bubbles in primary nonattainment areas which require but lack demonstrations of attainment, and requires bubbles in these areas to produce progress towards attainment, beyond equivalence to stringent emission limits. By specifying EPA's requirements for bubbles in all areas, this Policy Statement should make the development, review and approval of environmentally-sound bubbles more rapid and predictable.

C. Netting

Netting may exempt "modifications" of existing major sources from certain preconstruction permit requirements under New Source Review (NSR), so long as there is no net emissions increase within the major source or any such increase falls below significance levels.[3] By "netting out," the modification is not considered "major" and is therefore not subject to associated preconstruction permit requirements for major modifications under 40 CFR 51.18, 51.24, 52.21, 52.24, 52.27, or 52.28. The modification must nevertheless meet applicable new source performance standards (NSPS), national emissions standards for hazardous air pollutants (NESHAPs), preconstruction applicability review requirements under 40 CFR 51.18(a)-(h) and (l), and SIP requirements.

Netting's scope is determined by the definition of "source" for review of major modifications. In general, PSD areas use a single, plantwide definition, allowing actual emission reductions anywhere in a contiguous plant to compensate for potential emission increases at individual emitting units within the plant. Nonattainment areas can choose either this single, plantwide definition or a dual definition, so long as the definition selected does not interfere with attainment and maintenance of NAAQS and is consistent with progress towards attainment. Under the plantwide definition, significant net actual increases at the plant as a whole will trigger new source review. Under the dual definition, significant increases at either the plant as a whole or individual emitting units will trigger new source review.

In addition to these federal definitions for major new sources and modifications, state preconstruction permits for major or minor new sources and modifications may be required under 40 CFR 51.18(a), and some states preclude netting.

D. Emission Offsets

In *nonattainment* areas, major new stationary sources and major modifications are subject to a preconstruction permit requirement that they secure sufficient surplus emission reductions to more than "offset" their emissions. This requirement is designed to allow industrial growth in nonattainment areas without interfering with attainment and maintenance of ambient air quality standards. It is currently implemented through SIP regulations adopted by states to meet the requirements of 40 CFR 51.18(j).

In *attainment* areas, some new sources and modifications might not otherwise be able to be constructed because their emissions would result in

[1] "States" includes any entity properly delegated authority to administer relevant parts of a State Implementation Plan (SIP) under the Clean Air Act.

[2] "Case-by-case SIP revision" means case-by-case approval by EPA as a SIP revision. This is the traditional mechanism by which bubbles and other SIP changes have been approved by EPA.

[3] See, e.g., 40 CFR 51.18(j)(1)(x), 51.24(b)(23), 52.21(b)(23). See also today's Technical Issues Document, n. 47 and accompanying text.

On November 7, 1986, EPA restructured CFR Part 51 and renumbered many of that Part's sections (51 FR 40656). Because most readers will be more familiar with prior designations, today's notice contains citations based on the organization of Part 51 as it existed before this restructuring. Interested parties may use Appendix F of today's Technical Issues Document to convert today's Part 51 citations to the corresponding new ones.

an exceedance of the applicable PSD increment or ambient air quality standard, would significantly contribute to a violation of an ambient air quality standard in a designated primary nonattainment area, or would significantly contribute to visibility impairment in a Federal Class I area. These sources may use emissions offsets to allow desired growth while protecting that increment, standard, or visibility.

E. Emission Reduction Banking

Firms may store qualified emission reduction credits (ERCs) in EPA-approvable banks for later use in bubble, offset or netting transactions. Depending on the bank's rules, banked ERCs may also be sold or transferred to other firms which seek to meet certain regulatory requirements by use of emissions trades.

EPA's revised Offset Ruling (40 CFR Part 51, Appendix S) allows states to establish banking rules as part of their SIPs. This Policy Statement and accompanying Technical Issues Document detail the necessary components of a complete state banking rule approvable under the Clean Air Act. While many areas also allow banking of emission reductions for various purposes through various formal or informal banking mechanisms, banks which do not meet today's criteria (e.g., by not making banked emission reductions enforceable by the state by the time the reductions are actually banked, or by not assuring that deposits are taken explicitly into account for SIP planning purposes) cannot qualify emission reductions as ERCs, and may offer substantially less protection in the event of future SIP corrections or changes in ambient attainment status.

F. Generic Trading Rules

Generic rules adopted as part of the SIP can authorize states to approve certain types of individual transactions without the need for case-by-case SIP revisions or associated federal review prior to approval. The first state generic bubble rule was approved by EPA April 6, 1983 (48 FR 20551). For the current scope of permissible rules, see Section III below.

G. Effect of This Policy Statement

Emissions trading is largely voluntary: no source is required to trade, and no state is required by EPA to approve a particular trade or to adopt a generic rule. Trading merely offers states and stationary sources alternative ways to meet regulatory requirements. For example, states are free to adopt generic rules or continue to implement trades as individual SIP revisions. They may adopt rules which incorporate all or any combination of the above trading approaches.*

This Policy Statement is accompanied by a Technical Issues Document for use by states and industry in further understanding emissions trading. The Document offers elaboration and important detail on requirements and available options under the Clean Air Act.

This notice reflects the current Clean Air Act and existing EPA regulations. A policy statement cannot legally alter such requirements. However, this notice establishes EPA policy in areas not governed by applicable regulations and sets out general principles which may help states and industry apply those regulations in individual cases. Federal or state rulemaking in response to, e.g., future litigation or changes in ambient standards, attainment status, or SIP validity, may affect states or firms that plan to engage or have engaged in emissions trading activities.

Nothing in today's notice alters EPA new source review requirements or exempts owners or operators of stationary sources from compliance with applicable preconstruction permit regulations in accord with 40 CFR 51.18, 51.24, 51.307, 52.21, 52.24, 52.27, and 52.28. Interested parties should, however, be aware that bubble trades are not subject to preconstruction review or regulations where these trades do not involve construction, reconstruction, or modification of a source.

EPA intends to apply changes made by today's policy prospectively (e.g., not to actions which have already been approved as case-by-case SIP revisions or under generic rules). If, however, ambient violations are discovered in an area where EPA has approved a trade, or if other violations of Clean Air Act requirements are discovered in that area, sources involved in the trade should be aware that they are potentially subject to requirements for additional emission reductions, just as are all other sources in the area.

This policy requires that substantial additional reductions (at least 20%) in emissions remaining beyond applicable baselines be produced by future bubbles in primary nonattainment areas which require but lack approved demonstrations of attainment. However, applications for bubbles in such areas which are still pending at EPA without formal action under the 1982 policy, or which were previously submitted to EPA Regions under the 1982 policy but not accepted for evaluation, will be reexamined and processed for approval if they meet the requirements of the 1982 policy and contribute to progress towards attainment. "Progress towards attainment" means some extra reduction beyond equivalence to a lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline, with this baseline applied as of the time applicants originally sought credit. Pending bubbles in attainment areas and nonattainment areas with approved demonstrations of attainment will be processed for approval if they meet the requirements of the 1982 policy and show that ambient standards, PSD increments and visibility will not be jeopardized.

For further discussion on pending bubbles see Section I.A.1.b.(4) of the Technical Issues Document.*

II. Requirements for Creating, Using, or Banking Emission Reduction Credits*

A. Creating Emission Reduction Credits

Emission reduction credits (ERC's) are the common currency of all trading activity. ERCs may be created by reductions from either stationary, area, or mobile sources. To assure that emissions trades do not contravene relevant requirements of the Clean Air Act, only reductions which are *surplus, enforceable, permanent,* and *quantifiable* can qualify as ERCs and be banked or used in an emissions trade.

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* Some requirements *underlying* emissions trading are not voluntary. For example, construction of a major new source or major modification in a nonattainment area requires sufficient existing source reductions to constitute "reasonable progress toward attainment" despite the new emissions (40 CFR 51.18(j); Part 51, Appendix S). However, where the area has an established "growth margin" of extra reductions in a SIP which is currently approved by EPA, the state may provide the offsets from that growth margin rather than require them from the source, so long as it reduces the margin accordingly. See Clean Air Act section 173(1)(A) and (B).

* EPA encourages states or sources which submitted bubbles that were returned without evaluation by EPA to resubmit them under these criteria, provided they can document (a) formal, timely submittal of an application to EPA in accord with normal EPA procedures and (b) that the application was returned without evaluation, rather than rejected for failure to meet the terms of the 1982 policy. Bubble applications which were accepted for evaluation but rejected for failure to meet the 1982 policy will be treated as new applications under today's notice.

* Because this Policy Statement and accompanying Technical Issues Document reflect general Clean Air Act principles, states, individual sources, or commenters on specific rulemaking actions are free to show that a general principle does not apply to particular circumstances or could be satisfied using approaches other than those described. States, sources and commenters have this option under current law, and nothing in this Policy Statement or the Technical Issues Document restricts their opportunity to make such showings.

1. *Surplus.* At minimum, only emission reductions not required by current regulations in the SIP, not already relied on for SIP planning purposes, and not used by the source to meet any other regulatory requirement, can be considered surplus. To determine the quantity of emission reductions that are surplus, the state must first establish an appropriate emissions baseline from which surplus reductions can be calculated. Baseline emissions for any source are the product of three factors—emission rate, capacity utilization, and hours of operation.[7]

In attainment areas, the lower of actual or allowable values must generally be used for each of these baseline factors. However, allowable values for one or more of these factors, when higher than actual values, may be used in calculating the baseline emissions, provided those values are shown to be used or reflected in an approved demonstration.[8] The burden of meeting this test by written evidence rests with the state or applicant which seeks to use an allowable value.

When allowable values for one or more baseline factors are not used or reflected in an approved demonstration, such values may still be used in calculating baseline emissions. However, in such cases applicants must perform appropriate modeling to demonstrate that allowable values which are higher than actual values will not delay or jeopardize attainment and maintenance of ambient standards.[9]

In attainment areas where the PSD baseline has been triggered, credit may be granted consistent with the PSD baseline concentration as specified in 40 CFR 51.24(b)(13) and 52.21(b)(13). This will generally require use of actual values for each of the baseline factors. *However,* states may use allowable values if they show through appropriate modeling [10] that attainment and maintenance of neither the ambient standards nor applicable PSD increments will be jeopardized, and quantify the amount of increment consumed.

In nonattainment areas with approved demonstrations of attainment, the baseline must be consistent with assumptions used to develop the area's demonstration. This generally means that actual values must be used for each baseline factor where actual values were used for such demonstrations, and that higher allowable values for these factors may be used where allowable values were used for such demonstrations.[11] The burden of showing that an allowable value was used or reflected in the approved demonstration rests with the state or applicant which seeks to use an allowable value. In the absence of written evidence to that effect, full Level III modeling would be required to make use of an allowable value in baseline calculations.[12]

In primary nonattainment areas which need but lack approved demonstrations of attainment, states must show that bubbles meet special "progress" requirements designed to produce a net air quality benefit. This must be demonstrated by (1) using the lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline for each source involved in the trade; [13] (2) meeting the ambient equivalence tests outlined in sections II.B.2 of this Policy and I.B.1.b. of the Technical Issues Document; and then (3) producing a substantial net reduction in actual emissions (i.e., a reduction of at least 20% in the emissions remaining after application of the baseline specified above). The state must also provide assurances that the bubble is consistent with ambient progress and future air quality planning goals.[14]

3. *Enforceable.* To assure that Clean Air Act requirements are met, each transaction which revises any emission limit upward must be approved by the state and be federally enforceable. Means of making emission limits federally enforceable include SIP revisions (see section IV below), EPA-approved generic bubble rules (see Section III below), and new source preconstruction permits issued by states under EPA-approved SIP regulations pursuant to provisions of 40 CFR 51.18, 51.24, or 51.307, as well as construction permits issued by EPA or delegated states under 52.21.[15] Bubbles should be incorporated in an enforceable compliance instrument which requires recordkeeping based on the averaging period over which the bubble is operating, so it may easily be determined over any single averaging period that bubble limits are being met.

3. *Permanent.* Only permanent reductions in emissions can qualify for credit. Permanence may generally be assured by requiring federally enforceable changes in source permits or applicable state regulations to reflect a reduced level of allowable emissions.

4. *Quantifiable.* Emission reductions must be quantifiable both in terms of *estimating* the amount of the reduction and *characterizing* that reduction for future use. Quantification may be based on emission factors, stack tests, monitored values, operating rates and averaging times, process or production inputs, modeling, or other reasonable measurement practices. The same method of calculating emissions should generally be used to quantify emission levels both before and after the reduction.

B. Using Emission Reduction Credits

ERCs may be used by sources in bubble, offset or netting transactions. The general principles below will assure

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[7] For further discussion of these factors as they relate to baseline calculations, see Appendix B of the Technical Issues Document.

[8] This statement does not apply to netting, where "contemporaneous" actual emissions are always the baseline. See, e.g., 40 CFR 51.24(b)(3).

Bubbles in areas with demonstrations based only on qualitative judgments (e.g., the "example region" approach or no technical support) ordinarily may not rely, without appropriate modeling, on allowable values in calculating baseline emissions. However, bubbles in areas with demonstrations based on rollback or dispersion modeling may use allowable values that are reflected in the demonstration. In certain circumstances an allowable baseline value specified in a preconstruction permit may be deemed equivalent to one used or reflected in an approved demonstration. See Technical Issues Document, n. 7.

For further definition of "actual" and "allowable" see today's Technical Issues Document, Section I.A.1.a. and Appendix B.

[9] This demonstration would require a Level II modeling analysis, in accord with the modeling screen discussed below, using actual emissions for the pre-bubble case, unless, for *bubbles processed on case-by-case SIP revisions,* the Region determines that additional technical support is needed to protect applicable standards or increments. For discussion of Level II modeling, see Technical Issues Document, section I.B.1.b.(2). For further discussion of additional technical support which Regions may require in these circumstances, see Technical Issues Document, Section I.A.1.a. For a discussion of parallel modeling requirements for use of such higher allowable values in attainment areas under *generic rules,* see Technical Issues Document, n.31.

[10] See n.9 above.

[11] For netting, "contemporaneous" actual emissions are always the baseline. See, e.g., 40 CFR 51.18(j)(1)(vi).

[12] For further discussion of Level III modeling, see Technical Issues Document, section I.B.1.b(4).

[13] For purposes of today's notice, the "lowest-of-actual-SIP-allowable-or-RACT-allowable" emissions baseline means the product of (1) the lowest of the actual emission rate, the SIP or other federally enforceable emission limit, or a RACT emission limit, and (2) the lower of actual or allowable capacity utilization and hours of operation. For further discussion of this baseline, see Appendix B of today's Technical Issues Document.

[14] The specific assurances may be found in the Technical Issues Document at I.A.1.b.(3). EPA will not second-guess such state assurances, provided they are: (1) A substantial test applied by the state to each bubble, and (2) the state has explained how the proposed bubble is consistent with the area's projected attainment strategy. This authority has not been delegated with EPA. See Clean Air Act section 301(a)(1), 42 U.S.C. 7601(a)(1).

[15] EPA is also considering generic steps which would make state operating permits federally enforceable. Prior to use, *banked* credits need not be made federally enforceable. See Section II.C. below.

that all uses of ERCs are consistent with ambient attainment and maintenance considerations under the Clean Air Act. They are further articulated in the accompanying Technical Issues Document.

1. *Emissions trades must involve the same criteria pollutant.* An emission reduction may only be traded against an increase in the same criteria pollutant. For example, only reductions of SO_2 can be substituted for increases of SO_2.

2. *All uses of ERCs must satisfy applicable ambient tests.* The Clean Air Act requires that all areas throughout the country attain and maintain national ambient air quality standards and meet applicable ambient requirements relating to PSD increments and Class I protection, including visibility. The ambient effect of a trade depends on the dispersion characteristics of the pollutant involved. With the exception of visibility for NO_x, dispersion considerations will generally not affect trades involving VOC or NO_x, whose impacts occur across broad geographic areas. For these pollutants "pound for pound" trades may be treated as equal in ambient effect where all sources involved in the trade are located in the same control strategy demonstration area, or where the state otherwise shows such sources to be sufficiently close that a "pound for pound" trade can be justified. However, dispersion characteristics are important for bubble and offset trades of SO_2, particulates, CO, or lead, whose ambient impact may vary with where the emission increases and decreases occur. To assure ambient equivalence, such trades of these pollutants must satisfy ambient tests under the modeling screen discussed in the Technical Issues Document or under a similar, equally effective approach.[16]

3. *Bubbles must not increase hazardous pollutants.* Bubbles may not be used to meet applicable requirements of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) promulgated under section 112 of the Clean Air Act, to increase emissions at any source beyond the levels applicable NESHAPs prescribe, or to create any net increase in baseline emissions of a pollutant regulated under section 112. The applicable baseline for regulated sources is the lower of actual or NESHAPs-allowable emissions of the hazardous pollutant.

Where a NESHAP has been *proposed* but not yet promulgated for a source category which emits a pollutant listed under section 112, the proposal will serve as an interim guideline for evaluating the effects of any proposed emissions trade involving a source that would be subject to the proposed standard. In general, such trades will be approvable with respect to the emissions component of the trade subject to the proposal, so long as they result in emission limits at each source emitting the relevant pollutant which are equivalent to or lower than those the proposed NESHAP would have required if already promulgated.[17]

Where a pollutant has been *listed* under section 112 or where EPA has published a Notice-of-Intent-to-List, but no regulations for the source category involved in the trade have yet been proposed or promulgated, the trade will generally be acceptable with respect to the emissions component of the trade subject to notice or listing, if there is no net increase in actual emissions of that pollutant as a result of the trade.[18]

Any trade involving sources or source categories subject to the preceding subparagraphs must take place within a single plant or contiguous plants, and must credit only reductions below current actual or NESHAPs—allowable emissions, whichever is lower. But cf. generally n. 6 above and today's Technical Issues Document, section I.B.1.d.

Trades which do not meet the special restrictions discussed in this section may also be approved where surplus reductions in the pollutants addressed above compensate for increases in non-hazardous emissions of the same criteria pollutant (e.g., benzene, a hazardous VOC, is reduced to create credits for an increase in non-hazardous VOC emissions.) As long as such a trade would not result in an increase in either actual or allowable emissions of a pollutant subject to the preceding paragraphs at any source, it would not differ in nature or requirements from a trade involving only nonhazardous VOC emissions.

4. *ERCs from existing sources cannot be used to meet technology-based requirements applicable to new sources.* Under Clean Air Act section 111 and EPA implementing regulations, new affected facilities must satisfy technology-based New Source Performance Standards (NSPS), regardless of the attainment status of the area in which they are located. Under sections 165 and 173 and EPA implementing regulations, new or modified major stationary sources must also satisfy technology-based control obligations associated with pre-construction permits. These requirements prohibit use of credits from existing sources to meet or avoid applicable NSPS, and bar use of such credits to meet applicable new source review requirements for best available control technology (BACT) in PSD areas, or lowest achievable emission rate control technology (LAER) in nonattainment areas.[19]

5. *States may approve bubbles in primary nonattainment areas which require but lack approved demonstrations of attainment,* provided such trades meet requirements designed to produce a net air quality benefit and the state provides certain assurances. See section II.A.1. above and the Technical Issues Document, section I.A.1.b. Bubbles which meet these objective requirements will be processed for approval by EPA.

6. *Sources need not be subject to binding compliance schedules based on current SIP requirements* before they can apply for a bubble which would supersede those requirements. Sources that are *already* subject to binding compliance schedules should be aware, however, that such schedules remain fully enforceable until a bubble affecting the schedule has been approved by EPA or under a state generic rule and the

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[16] For similar reasons, bubbles of these pollutants must involve sources which are in the same or adjacent control strategy demonstration areas within the same general air basin.

See section II.A.1. above and Technical Issues Document, Section I.A.1.a regarding additional technical support required for certain trades in attainment areas.

While bubbles in primary nonattainment areas which need but lack approved demonstrations of attainment must produce a net air quality benefit, this does not entail additional ambient tests. Such bubbles must first meet the general tests under the modeling screen showing ambient equivalence for bubbles, prior to producing the required additional reductions. They must then produce additional reductions of at least 20% beyond the applicable baseline emissions used to demonstrate ambient equivalence. Since these additional reductions will necessarily reduce ambient concentrations below equivalence at some receptors, while continuing to meet the tests for ambient equivalence at all others, a net air quality benefit should occur and no additional ambient showings, beyond those generally required for all bubbles, are required.

[17] The allowable emission rate for a source subject to a proposed NESHAP is the limit stipulated in the proposal.

[18] Where EPA has issued a "Notice-of-Intent-Not-to-Regulate" one or more source categories for a listed pollutant, emissions of that pollutant from the unregulated source category will nevertheless be treated the same as emissions of any other listed pollutant. Under limited circumstances, similar treatment will be given to pollutants for which a "Notice-of-Intent-Not-to-List" has been published. See the Technical Issues Document, section I.B.1.d.

[19] But cf. sections I.C. and I.D. above.

Today's notice does not address whether or under what circumstances facilities subject to NSPS, BACT or LAER may surpass applicable permit limits reflecting such requirements in order to create credits for existing-source trades.

schedule has been modified accordingly. Sources subject to compliance schedules in administrative orders or judicial decrees must obtain prior approval from EPA or the relevant court, as appropriate, to be relieved from the schedule contained in the order or decree. Sources that are subject to SIP requirements remain responsible for meeting those requirements unless and until a bubble has become effective under Federal law. See section II.B.12 below.

7. States may extend certain compliance schedules. States may no longer grant compliance extensions under new or revised generic rules in *nonattainment areas*, whether or not such areas have demonstrations.[20] However, states may continue to grant compliance date extensions under generic rules in *attainment areas*, provided EPA has approved the extension provisions of the generic rule as being adequate to comply with the Clean Air Act, including requirements for attainment and maintenance of ambient air quality standards.

States that wish to give sources in nonattainment areas, and sources in attainment areas for which there is no applicable generic SIP provision, more time to implement bubbles by granting compliance extensions, must receive EPA approval of the extensions through case-by-case SIP revisions. Requests for such compliance date extensions, whether in attainment or nonattainment areas, may be submitted to EPA together with bubbles, as part of a single SIP revision package. EPA will separately evaluate the time extension portion of these SIP revision packages in accord with the Agency's normal criteria for review of time extensions, including consistency with the Act's requirements for expeditiousness, reasonable further progress, and attainment and maintenance. Sources should be aware that disapproval of such time extension requests may result in disapproval of the entire package (i.e., both post-trade limits and the time extension) or only part of it, depending on whether the state views these components of the proposed SIP revision as separable.

8. States may approve bubbles involving open dust sources of particulate emissions, based on modeling demonstrations. Open dust trades may be approved through individual SIP revisions based on acceptable modeling and/or monitoring demonstrations, provided sources agree to post-approval monitoring to determine if predicted air quality results have been realized and make an enforceable commitment to achieve necessary additional reductions if predicted results do not materialize.

9. Trade involving lead. Unlike other criteria pollutants, EPA does not designate nonattainment areas for lead. However, the Regional Administrator will review lead trades, as all other trades, to assure that they do not interfere with attainment and maintenance of NAAQS.

10. Trades involving ERCs from mobile source measures. ERCs from mobile source measures may be used to meet SIP requirements applicable to existing stationary sources, so long as such reductions are surplus, permanent, quantifiable, and enforceable. Reductions from certain types of mobile-source measures (e.g., mechanical conversion of existing vehicle fleets to cleaner fuels such as methanol) may satisfy these criteria more readily than those from other transport-related measures. However, due to possible difficulties in determining whether specific mobile-source reductions fully meet these criteria, all such trades must be implemented as case-by-case SIP revisions.

11. Interstate trades. Trades involving sources located in neighboring states may be approved, provided they meet all other requirements of today's notice. However, in order to avoid complex SIP accounting issues, where state trading requirements differ EPA will require that such trades meet the substantive requirements of the more stringent state. In general, EPA will deem ERCs created in one state to contribute to progress in the state where used to the extent of that use, provided that applicable ambient tests (section II.B.2 above) are met. Interstate trades must be implemented through case-by-case SIP revisions.

12. Bubbles must not impede enforcement. In general, bubbles are a form of SIP revision which should be treated neither more nor less stringently than other SIP revisions. Bubbles should not become a shield against enforcement actions for sources which have failed to take necessary steps to meet required control obligations on time.

Sources seeking trades should note that they remain subject to enforcement of existing (pre-trade) SIP limits until the bubble is approved. EPA will use the same principles and procedures for deciding whether to initiate enforcement actions in these circumstances as the Agency applies to any other source which is subject to a proposed or final SIP revision.

Under established EPA policy, regulated sources must be subject to an applicable, enforceable emission limit at all times. Accordingly, sources which have approved bubbles with emission limits effective at a future date, and which are not in compliance with their pre-trade limits prior to that effective date, may be subject to enforcement action, which could include penalties based on a failure to meet the pre-trade limits. Sources in these situations may wish to minimize the chance that capital expenditures may be required to meet pre-trade limits, either by (a) agreeing to post-trade compliance dates which are substantially similar to their pre-trade compliance dates, or (b) accelerating their compliance with post-trade limits.

In accord with the general principle that bubbles should be treated neither more nor less stringently than other SIP actions, implementation of this Policy Statement will be neutral with respect to EPA enforcement of pre-trade emission limits. This means that EPA will not specifically select for enforcement action noncompliant sources seeking to use a bubble either to come into compliance or to restructure traditional compliance. However, it also means that EPA will not withhold or defer enforcement simply because a source is seeking alternative emission limits through a bubble. In exercising its enforcement discretion, EPA will apply the same considerations to noncompliant sources which seek to comply through bubbles as to those which do not.

C. Banking Emission Reduction Credits

Only emission reductions that are surplus, permanent, quantifiable, and enforceable can qualify as ERCs and be deposited in EPA-approvable banks.[21] Such banks offer sources legal recognition that qualifying reductions meet these ERC requirements. However,

[20] Existing generic rules applicable to these areas must be revised to comport with this principle where they contain such generic extension provisions. EPA will publish Federal Register notices identifying any generic rules which require formal modification. Failure to resolve deficiencies identified in such a notice within the prescribed time period may result in EPA rescinding approval of the existing generic rule or issuing a notice of SIP deficiency. EPA expects states to ensure in the interim, so far as feasible, that compliance date extensions under existing generic rules are not granted to sources located in nonattainment areas. See section III below and section II.E.4. of the Technical Issues Document.

[21] Under today's notice emission reductions must be made enforceable *by the state* in order to qualify as ERCs and be deposited in EPA-approvable banks. However, because mere deposit of a reduction cannot result in emissions increases elsewhere, banked reductions need not be made federally enforceable until used.

the fact that an ERC has been banked does not relieve it from the need to meet all criteria of the specific regulatory program under which it is to be used.[22] Because some trades have special limitations (e.g., only reductions occurring at the same major stationary source can be used for netting), banks do not guarantee the validity or specific amount of particular banked ERCs for all potential uses or for all time. To provide maximum protection for the environment and sources and to avoid potential legal problems, state banking rules may specify the types of sources eligible to bank ERCs and any additional conditions placed on certifying, holding or using banked ERCs.

State banking rules may establish ownership rights. However, any such rights must be consistent with Clean Air Act requirements, including the requirement that SIPs provide for expeditious attainment and maintenance of ambient air quality standards and protect PSD increments and visibility. To be approvable by EPA, such banking rules must also treat banked reductions as current actual emissions "in the air" at the source of their creation, in order to protect the integrity of future air quality planning. Failure to track the ambient effects of such banked reductions (e.g. by not including them in a new or updated inventory used for SIP planning purposes, or by relying on those reductions to secure attainment redesignations) would ordinarily preclude their use as ERCs, due to double-counting. Nevertheless, states have considerable latitude in meeting these requirements, and may guarantee banked ERCs against full or partial reduction in quantity, so long as that guarantee does not undermine attainment redesignations or interfere with progress and attainment should ambient standards change or additional emission reductions be required. The Technical Issues Document, section I.C.9, outlines ways such guarantees may be made effective consistent with these requirements.

In many states, banking could be an extension of ongoing preconstruction permit activities. The state or its designee could accept and evaluate requests to certify an ERC, maintain a publicly-available ERC registry or similar instrument describing the quantity and types of banked credits, and track transfers and withdrawals of ERCs.

Because banked reductions do not increase emissions at any source, they need not be made federally enforceable until used. For administrative or other reasons states may, however, choose to make them federally enforceable upon deposit. How the state makes a reduction federally enforceable for banking will depend on the type of source at which the reduction occurs. In some states, reductions associated with other modifications at a source can be included in federally-enforceable preconstruction permits issued under rules approved pursuant to 40 CFR 51.18, 51.24 or 51.307. States with EPA-approved generic rules can use their rules' procedures to make reductions occurring at existing sources federally enforceable. See Section III below. Since these transactions involve only reductions, air quality modeling is generally not required to assure that new emission limits do not interfere with attainment and maintenance of ambient standards, protection of applicable PSD increments, or impairment of visibility in mandatory federal class I areas. Such reductions will automatically meet the generic rule's test of whether a particular limit is within EPA's preapproved array of acceptable emission limits.[23]

States without EPA-approved generic rules can adopt rules limited to banking transactions, or can use the standard SIP revision process to make reductions federally enforceable at existing sources. General state preconstruction permit or review programs that have received EPA approval may also be used for this purpose, since permits issued through such programs are federally enforceable. See 40 CFR 51.18; 51.24; 51.307.[24]

III. State Generic Trading Rules

Use of emission reduction credits under state regulations approved by EPA as generic for identified classes of trades will not require individual SIP revisions for those trades. The Technical Issues Document explains acceptable generic procedures which states may adopt to reduce the need for individual SIP revisions.

Emissions trades can be approved without case-by-case SIP revisions if evaluated by the state under EPA-approved procedures which assure that no trade which meets their terms will interfere with timely attainment and maintenance of ambient standards, protection of applicable PSD increments, or visibility provisions. State generic rules are approvable only if their procedures are sufficiently replicable in operation to meet this test. By approving the generic rule, EPA approves in advance an array of SIP-compatible emission limits, and no further case-by-case Federal review or approval is required for individual trades which meet the terms of the rule.

In order to ensure that generic rules are properly implemented, EPA intends to (a) examine and comment on, together with any other public commenter, the information which must be provided for individual trades proposed by states under a generic rule, (b) conduct reviews of individual bubbles approved under a generic rule, and (c) periodically audit the general implementation of generic rules, as part of its National Air Audit System reviews of state air programs.[25]

Any trade under a generic rule will involve emission increases at some sources and extra emission decreases at others. For trades to be approvable under a generic rule, the sum of these increases and decreases (beyond

[22] States may, however, expand opportunities for use of banked credits beyond those of current SIP programs (e.g., extend the "contemporaneous" period for netting), by submitting revised regulations addressing the banking and use of such credits, for approval as SIP revisions.

[23] Modeling will be necessary when a banked ERC is later evaluated for use in a trade, to the extent modeling is generally required for that particular type of emissions trade.

[24] In *primary nonattainment areas which need but lack approved demonstrations*, use for bubble purposes of banked credits produced by shutdowns or curtailments will continue to be allowed on the same terms as use of other banked credits, provided their use is subject to stringent qualitative review to assure technical, legal and programmatic consistency with SIP planning goals (e.g., avoidance of doublecounting or "shifting demand"). However, sources which seek to use banked credits from shutdowns or curtailments for bubble purposes after publication of today's notice must show that a written application was submitted to make the shutdown/curtailment state-enforceable through or concurrent with use of a formal bank or informal banking mechanism, prior to the time the shutdown/curtailment occurred. For sources which banked or sought to bank credits from shutdowns or curtailments in these nonattainment areas prior to publication of today's notice, written evidence must be provided showing either that an application to deposit the credits in a formal bank was submitted to the state prior to the time the shutdown/curtailment occurred, or that the state acknowledged, before or at the time the shutdown/curtailment occurred, both the existence of that shutdown/curtailment, and the source's intent to use the resulting credits in a future trade. For additional detail on banking and use of credits resulting from shutdowns or curtailments in these or other areas, see Technical Issues Document, Sections I.A.1.c.(3) and I.C.

[25] See, e.g., National Air Audit System Guidelines for FY 1984, Office of Air Quality Planning and Standards, EPA-450/2-83-007 (November 1983). State-approved generic trades that do not meet the terms of the relevant generic rule do not alter underlying SIP requirements, which remain fully enforceable. Generic rules found to be generally deficient in substance or implementation could ultimately result in notices of SIP deficiency or in rulemaking to rescind EPA's approval of the rule. For more detail on EPA oversight of generic rules, see Technical Issues Document, Section II.E.

applicable net baseline emissions) must be zero or less. Subject to this requirement, states may adopt generic rules which exempt from individual SIP revisions: (1) *De minimis* trades where total increases in emissions from all increasing sources (which must be balanced by equal or greater emissions decreases from other sources) are less than 25 tons per year (TPY) of particulates, 40 TPY of SO_2, 100 TPY of CO, or 0.6 TPY of lead, after applicable control requirements; (2) large classes of trades involving VOC or NO_x emissions;[86] (3) trades between certain types of SO_2 sources, between certain types of CO sources, between certain types of stationary lead sources, or between certain types of particulate sources, for which it can reasonably be assumed that "pound for pound" trades will produce ambient effects equivalent to those which approved air quality models would predict; and (4) other SO_2, CO, Pb or particulate trades which do not increase baseline emissions and for which carefully defined modeling predicts no significant increase in ambient concentrations.

States and sources should, however, be aware that because of replicability problems inherent in modeling, generic rules which rely on preapproved procedures for modeled demonstrations of ambient equivalence may be difficult to draft or implement, and many trades may not be approvable under such rules. For these reasons generic rules covering only the first three classes of trades above will often prove easiest to secure. EPA encourages states to work closely with EPA Regional Offices to formulate and adopt approvable rules or develop alternative approaches that equally assure attainment and maintenance of ambient standards and protection of PSD increments and visibility. See Section II of the Technical Issues Document, which details criteria under which such generic rules may be approved.

To the extent general state procedures for rulemaking or permit changes do not assure reasonable public notice of proposed and final limits or effective opportunity for comment on proposed trades, states must incorporate such provisions in their generic rules.

In primary nonattainment areas which need but lack approved demonstrations, new generic rules must require, and existing generic rules must, as requested by EPA, be revised to require bubbles to use lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baselines, and produce a net air quality benefit (as described below). New or revised generic rules in these nonattainment areas must be accompanied by certain assurances of consistency with air quality planning goals as well as a commitment to make certain additional assurances when the state approves individual bubbles under the rule. Bubbles approved under existing generic bubble rules before the effective date of this policy will not be affected by these requirements. Because EPA-approved state regulations have independent legal force, future bubbles submitted under existing generic rules may also be approved by states in accord with those rules, until such rules are modified to meet the criteria below.[87]

Existing generic rules in these areas must be modified to assure that bubbles produce an overall emission reduction at least equal (in percentage terms) to the overall emission reduction from controllable sources (in percentage terms) needed to attain in the area. Criteria for modifying generic rules are set forth in Section II.D. of the Technical Issues Document, including a requirement for a reduction equal to the greater of either the percentage reduction required for attainment, or a 20% reduction in emissions remaining after application of appropriate baselines. New and pending applications for generic bubble rules which meet these criteria will be processed for approval.

EPA will publish **Federal Register** notices identifying any generic rules applicable to these areas which require formal modification in order to meet the progress requirements above or other requirements of EPA's current Emissions Trading Policy. These notices will identify specific deficiences and means for correcting them, and will specify a schedule for submittal and review or modified rules. Failure to resolve deficiencies identified in these notices within the prescribed time period may result in EPA rescinding its previous approval or issuing a notice of SIP deficiency.[88]

IV. Bubbles Which Require Case-By-Case SIP Revisions

States and sources must use the case-by-case SIP revision process to implement bubbles which are not covered by a generic rule. Because the case-by-case SIP revision process can take account of many more individual variations, numerous trades which could not be accomplished through generic rules or similar means may still be approvable as case-by-case SIP revisions.

EPA will take action on generic rules and individual trades submitted as SIP revisions as quickly as circumstances permit after a state has adopted a SIP revision and submitted the action to EPA. EPA encourages "parallel processing" of such SIP revisions, with EPA and the state conducting concurrent review so that both agencies can propose and take final action at roughly the same time. EPA will also publish noncontroversial SIP revisions as immediate final actions, converting them to proposals only if requests to submit adverse comments are received within 30 days (see 46 FR 44477, September 4, 1981). In all bubble actions EPA will clearly identify (or require states to identify, as appropriate) both pre- and post-trade actual and allowable emissions for each source involved in the trade, so that the ambient effects of each bubble may be known.

V. Conclusion

This Policy Statement sets out basic principles for approving individual trades and generic trading rules. It tightens many requirements in order to better ensure SIP integrity and environmental progress, while offering ample opportunities for use of approvable, environmentally-sound trades. EPA encourages states and sources to use these principles as a framework and refer to the accompanying Technical Issues Document for further discussion and examples. EPA also encourages states to develop other approaches which satisfy these principles while meeting their specific needs.

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[86] Where visibility impairment due to elevated NO_x emissions is a concern, generic trades involving NO_x must ordinarily be subject to ambient requirements similar to those applicable to generic trades involving TSP, SO_2, CO or Pb.

[87] In the interim, EPA expects states to ensure, so far as feasible, that future bubbles approved under existing generic rules are consistent with this policy as well as the terms of their EPA-approved rules. States should be aware that without this or similar precautions, continued approval of bubbles under existing generic rules containing identified deficiencies may create or accentuate plan deficiencies that may have to be corrected at a later date or compensated for by other means. See section II.E.4. of the Technical Issues Document.

[88] Such notices may also be issued for existing generic rules in attainment areas and nonattainment areas with approved demonstrations, if these generic rules are found to require procedural revision in order to make them consistent with the current Emissions Trading Policy. See Technical Issues Document, section II.E.4.

EPA recognizes the additional timing burden which may be imposed on bubble applicants in areas where new generic rules cannot be or have not been developed to meet the specific air quality benefit requirements described above, and will attempt, so far as feasible, to ameliorate that burden in implementing this policy. See, e.g., n.6 and section II-B-12, above and related Preamble discussion, at n.48 and accompanying text.

As a policy statement, this notice does not establish conclusively how EPA will resolve issues in individual cases. EPA will accept public comment on specific SIP changes submitted under it, and will review individually each generic rule and those emissions trades submitted as SIP revisions to determine their acceptability under the Clean Air Act. Interested parties will have full opportunity to scrutinize application of these principles in specific cases, and to seek subsequent judicial review of such cases after EPA has taken final action on particular trades or generic rules.

Dated: November 18, 1986.

Lee M. Thomas,

Administrator.

Emissions, Trading: Technical Issues Document

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EMISSIONS TRADING: TECHNICAL ISSUES DOCUMENT

This Document offers more detail on technical issues for firms and pollution control agencies seeking to implement individual emissions trades or generic trading rules that meet the principles in EPA's final Emissions Trading Policy Statement. It describes both the legal requirements for emissions trades under the Clean Air Act, and a range of legal options which states [1] and sources may consider. States and firms may pursue other approaches consistent with those discussed here.

Section I of this Document explains general principles governing all emissions trading. Section II explains principles governing state generic rules. Section III discusses special considerations for emissions trades which must be implemented as case-by-case SIP revisions.

Because these sections reflect general Clean Air Act principles, states, individual sources or public commenters remain free to show that a general principle does not apply to particular circumstances or can be satisfied using another approach. States, sources and commenters have this option under current law, and nothing in the Policy Statement or this Document restricts their opportunity to make such showings.

Nothing in today's notice alters EPA new source review requirements or exempts owners or operators of stationary sources from compliance with applicable preconstruction permit regulations in accordance with 40 CFR 51.18, 51.24, 51.307, 52.21, 52.24, 52.27, and 52.28. Interested parties should, however, be aware that bubble trades are not subject to preconstruction review or regulations where these trades do not involve construction, reconstruction or modification of a source within the meaning of those terms in the regulations listed above.

[1] "States" includes any entity properly delegated authority to administer relevant parts of a State Implementation Plan (SIP) under the Clean Air Act.

I. Elements Of Emissions Trading

The basic elements of any emissions trade are the *creation* of an emission reduction credit (ERC), its *use* in a trade and its possible *storage* in a bank prior to use.

A. Creating Emission Reduction Credits

States may grant credit only for those emission reductions that are surplus, enforceable, permanent, and quantifiable. Otherwise use of ERCs might degrade air quality, threaten the viability of the area's SIP, and make more stringent control requirements necessary.

1. All Reductions Must Be Surplus

At minimum, only emission reductions not required by current regulations in the SIP, not already relied on for SIP planning purposes, and not used by the source to meet any other regulatory requirement can be considered surplus and substituted for required reductions as part of an emissions trade.

The first step in qualifying a reduction as "surplus" is to establish a level of baseline emissions. This baseline represents the level of required emissions beyond which reductions must occur for a source to be eligible for credit. Three baseline factors—emission rate, capacity utilization, and hours of operation—must be used to compute and compare pre-trade and post-trade emission levels.[2]

The baseline for each source must be established both on an annual basis and for all other averaging periods consistent with the relevant NAAQS and PSD increments. This approach is necessary to protect the ambient standards and PSD increments on a short term as well as an annual basis. The baseline will generally be determined by the attainment status of the area,[3] by the way the state developed its SIP, and by whether the area is subject to PSD requirements.

a. Use of Actual or Allowable Emissions as the Baseline: Attainment Areas and Nonattainment Areas With Approved Demonstrations of Attainment (including rural ozone nonattainment areas). In attainment areas, baseline emissions must generally be calculated using the lower of actual or allowable values[4] for all three baseline factors. However, allowable values corresponding to one or more of these factors, when higher than corresponding actual values, may be used in calculating baseline emissions, provided those values are shown to be used or reflected in an approved demonstration.[5] The burden of meeting this test rests with the state or applicant. Where the State or applicant cannot show by written evidence[6] that the demonstration assumed an allowable value for a given baseline factor, appropriate modeling would be required in order to use an allowable value for that factor in calculating baseline emissions for the source.[7] This will require a Level II modeling analysis as specified in the modeling screen described below, using actual emissions for the pre-trade case, unless the appropriate EPA Regional Office ("the Region") determines that additional technical support is necessary to protect the NAAQS, PSD increments or visibility. Additional technical support may be necessary because crediting the difference between actual and allowable values for even one of these factors may produce a post-trade increase in actual emissions sufficient to jeopardize applicable standards, increments or visibility.

Additional technical support is not necessarily limited to determining the impact of the increases from the trade. The Region may require such additional technical support, up to and including full Level III modeling, as is necessary to assure that applicable NAAQS, PSD increments and visibility requirements will be protected. It may require the determination of background concentrations to which the impacts of possible emissions increases that would otherwise fall below Level II significance values must be added. Background concentrations should be determined in a manner consistent with EPA's *Guidelines on Air Quality Models.*

In attainment areas where the PSD baseline has been triggered, the trading baseline for a source must generally be computed using actual values for all three baseline factors (i.e., only reductions below a source's actual emissions can be considered surplus). Because 40 CFR 51.24 and 52.21 specify that increses in actual emissions occurring after the PSD baseline date consume PSD increment, any trades based on allowable emissions which would potentially increase actual emissions must perform at least a Level II modeling analysis using actual emissions for the pre-trade case, and provide additional technical support if deemed necessary by the Region, to demonstrate that they protect the relevant increment ceiling, NAAQS, and visibility.

In nonattainment areas with approved demonstrations, baseline emissions for a source may be calculated using either allowable values or actual values for the three baseline factors, depending on the assumptions used in developing the area's demonstration.[8]

Some states relied on allowable values for certain sources in developing their SO_2 and TSP attainment plans. In these nonattainment areas, sources may use allowable values in calculating baseline emissions, to the extent the state used or assumed those allowable values as the basis for its demonstration. The burden of showing that an allowable value was used or reflected in an approved demonstration rests with the state or applicant which seeks to use an allowable value.[9]

Other nonattainment areas either used inventories based on actual emissions, or relied on measured (and therefore "actual") ambient air quality values, as the primary basis for determining SIP emission limits needed

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[2] For further discussion of these factors as they relate to the calculation of baseline emissions, see Appendix B.

[3] Unclassified areas are treated as attainment areas for permitting and emissions trading purposes.

Unlike other criteria pollutants, EPA does not designate nonattainment areas for lead. However, the Regional Administrator will review lead trades, as all other trades, to assure that they do not interfere with attainment and maintenance of the NAAQS.

[4] For the definition of "actual" and "allowable" values, and further discussion on calculation of baseline emissions, see Appendix B.

[5] This statement does not apply to netting, where "contemporaneous" actual emissions are always the baseline. See, e.g., 40 CFR 51.24(b)(3).

Bubbles in areas with demonstrations based solely on qualitative judgements (e.g., the "example region" approach or no technical support) ordinarily may not rely, without appropriate modeling, on allowable values in calculating baseline emissions. However, bubbles in areas with demonstrations based on rollbacks or dispersion modeling may use allowable values that are reflected in the demonstration.

[6] For example, the demonstration calculations themselves, accompanying materials, or affidavits from those who constructed the demonstration.

[7] In certain circumstances an allowable baseline value specified in a preconstruction permit will be deemed equivalent to one used or reflected in an approved demonstration. For example, a source in an *attainment* area where a PSD baseline has been triggered may use allowable values consistent with its preconstruction permit, if that source's emissions are not reflected in the PSD ambient baseline concentration. (However, if modeling using allowable emissions predicts a PSD increment violation, then additional analyses must be done to assure that the PSD increment is protected.) A source in a *nonattainment* area may use allowable values consistent with its preconstruction permit to calculate its baseline, provided that permit post-dates the nonattainment designation, SIP call, design year, or baseline inventory year, whichever is applicable.

[8] This statement does not apply to netting, where "contemporaneous" actual emissions are always the baseline. See, e.g., 40 CFR 51.18(j)(1)(vi). See also Appendix B for detailed discussion of "actual" and "allowable" emissions.

[9] See n. 6 and 7 above.

to demonstrate attainment. In some areas, SIP demonstrations were based merely on qualitative judgments (e.g., "example region" approaches). Baseline emissions for sources in all these other areas must generally be calculated using the lower of actual or allowable values for each baseline factor. However, states may approve, on a case-by-case basis, use of allowable values in calculating baseline emissions, where they explicitly demonstrate that such use comports with reasonable further progress and will neither create a new ambient violation nor delay the planned removal of an existing violation. Such demonstrations require full Level III modeling and must be submitted to EPA as case-by-case SIP revisions.

EPA deems designated *Rural Ozone Nonattainment Areas* to possess acceptable demonstrations of attainment provided they have an approved new source review rule and require RACT controls for all major VOC sources for which EPA has issued Control Technique Guidance (CTG) documents. (See, e.g., 43 FR 21673 (May 19, 1978)). Because these areas' nonattainment is generally caused by emissions from sources in a nearby urban area, control of emissions from that area is expected to bring the rural area into attainment. Put differently, EPA does not require rural areas to cure problems due to transport from pollution-generating areas which rural areas cannot control. However, EPA believes that further clarifications are required for bubbles in these areas.

Sources involved in such bubbles must use RACT emission limits in calculating baseline emissions, if subject to Group I or II CTGs under the EPA approved SIP for these areas. Sources subject to other SIP emission limits must use those limits in calculating baseline emissions. Other baseline factors must also be consistent with the applicable SIP requirements, and will generally be actual historical values. Where a source is not regulated by the EPA-approved SIP its baseline will be actual emissions in the year EPA approved the Part D plan for the affected rural area. In those approvals, EPA presumed that controls for sources in the upwind urban areas, as well as RACT on CTC sources in the rural area, would bring about attainment in the rural area, and that non-CTC sources in the area, unless regulated by the SIP, could continue to emit at actual, non-RACT levels without interfering with attainment in those areas. See also 43 FR 21673 (May 19, 1978).

b. Special Progress Requirements for Bubbles In Primary Nonattainment Areas Which Need But Lack Approved Demonstrations of Attainment. EPA will approve bubbles which are consistent with the attainment needs of these areas, which produce a net air quality benefit, and which therefore secure interim progress towards attainment.[10]

(1) *Objective Tests For All Applications.* Bubble applications in primary nonattainment areas which require but lack approved demonstrations of attainment will be deemed to produce a net air quality benefit and will be processed for approval if they:

(a) Use lowest-of-actual-SIP-allowable or RACT-allowable emissions baselines. Such baselines are calculated using either:

(i) The actual emission rate, the SIP or other federally enforceable emission limit, or the applicable RACT emission limit,[11] whichever is lower, to compute the baseline for each source involved in the trade. This baseline factor shall be determined as of the date of the source's application to bank or trade, whichever is earlier.

(ii) The lower of actual or allowable capacity utilization and hours of operation to compute the baseline for each source involved in the trade. Actual values shall generally be based on the two years of operation preceding the application to bank or trade, unless another two year period is shown to be more representative of actual operations. Sources which shut down prior to the application to bank or trade have zero emissions, and therefore no credit is available.

For sources which banked or sought to bank credit in these nonattainment areas prior to publication of today's notice, the "date of application to bank" is the date of written application to the states to bank credit through a formal bank or informal banking mechanism for use in future trades. For sources which seek to bank credit in these areas following publication of today's notice, the date of application to bank will be the date of written application to the state to *make a reduction state-enforceable* through or concurrent with use of a formal bank or informal banking mechanism.

(b) Using baseline emissions defined above, meet applicable *de minimis*, Level I, Level II or Level III modeling tests for ambient equivalence, as appropriate.

(c) Produce a substantial net reduction in actual emissions (i.e., a reduction of at least 20% in the emissions remaining after application of the baselines specified above).

(d) Are accompanied by the assurances of consistency with ambient progress and air quality planning goals specified in section I.A.1.b.(3) below.

(2) *Where These Special Progress Requirements Will Apply.* The following primary nonattainment areas need but lack approved demonstrations, and bubbles within them are therefore subject to the special progress requirements in section I.A.1.b.(1) above:

(a) Areas that are designated primary non-attainment areas under section 107 for the pollutant involved in the trade and which failed to submit a 1979 Part D attainment demonstration or which submitted one that has not yet received full EPA approval. This includes primary total suspended particulate (TSP) nonattainment areas which submitted a SIP that did not include an actual demonstration of attainment but still received EPA approval (i.e., a "RACT plus studies" SIP).

(b) Extension nonattainment areas which failed to submit a 1982 SIP demonstration, or which submitted one that has not yet received EPA approval. Also included are those ozone nonattainment areas that are unable to demonstrate attainment by 1987, unless a demonstration of attainment for the area is subsequently approved by EPA.

(c) Areas that have received either: (1) A section 110(a)(2)(H) notice of deficiency based on failure to attain or maintain the National Ambient Air Quality Standards (NAAQS), in the form of a SIP call or a new section 107 or 171(2) nonattainment designation; or (2) a notice of failure to implement an approved SIP.

(d) Areas which received notice from EPA that they have failed to meet conditions in their EPA-approved SIPs, including commitments to adopt particular regulations by specified dates. The one exception would occur where the only portion of the SIP (including the attainment demonstration) lacking full approval is the inspection/maintenance provision for mobile sources. In these circumstances, stationary-source bubbles will be treated as if the area had a fully approved SIP.

(e) Any area that does not have an EPA-approved or EPA-promulgated plan for lead.

[10] While not all of today's new requirements for bubbles in these areas are strictly "baseline" matters, all basic requirements for these bubbles are set out here for simplicity. New requirements also apply to generic bubble rules in these areas. See Section II.D below.

[11] Where an emission limit for a source involved in the trade has not previously been approved by EPA as RACT, a baseline reflecting a negotiated RACT emission rate must be agreed upon by the source, state and EPA for the source in question.

(3) *State Assurances.* EPA will not approve a bubble in primary nonattainment areas needing but lacking approved demonstrations unless the state provides assurances that the proposed trade will be consistent with its efforts to attain the ambient standard. The state must make the following representations to the EPA Regional Office in or with the letter formally submitting the bubble as a revision to the SIP:

(a) The resulting emission limits are consistent with EPA requirements for ambient air quality progress, as specified in Section I.A.1.b.(1) above.

(b) The bubble emission limits will be included in any new SIP and associated control strategy demonstration.

(c) The bubble will not constrain the state or local agency's ability to obtain any additional emission reductions needed to expeditiously attain and maintain ambient air quality standards.

(d) The state or local agency is making reasonable efforts to develop a complete approvable SIP and intends to adhere to the schedule for such development (including dates for completion of emissions inventory and subsequent increments of progress) stated in or with the letter formally submitting the bubble or previous such letters.

(e) The baseline used to calculate the bubble emission limits is consistent with the baseline requirements in section I.A.1.b.(1) above.

These state assurances must be made in writing by the appropriate state or local authority (e.g., State Air Director, Air Pollution Control Board, or Legislative Committee). EPA will not second-guess such state representations, provided: (1) They are a substantial test applied by the state to each bubble, and (2) the state has explained how the proposed bubble is consistent with the area's projected attainment strategy. Nor will EPA examine, or expect states to examine in making such representations, any specific source's subjective motivation in making claimed reductions.

(4) *Treatment of Pending Bubble Applications.* "Pending bubbles" means those which are currently pending at EPA Regions or Headquarters, as well as any bubble applications which were formally submitted to EPA Regions under the 1982 policy but returned without action because final bubble criteria had not yet been issued. In primary nonattainment areas needing but lacking demonstrations, these bubbles should contribute to progress towards attainment. "Progress towards attainment" means some extra reduction beyond equivalence, with the lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline applied as of the time applicants originally sought credit. In other areas these bubbles must show that applicable standards, increments, and visibility requirements will not be jeopardized. Pending bubbles which meet these tests and all other applicable requirements of the 1982 policy will be processed for approval.

Pending bubbles may undergo limited modification by the states or sources which submitted them in order to meet the new requirements outlined above (e.g., it may be necessary to recalculate the applicable baseline emissions of certain bubbles in nonattainment areas needing but lacking demonstrations and to reconfigure those bubbles in response to the reduced credit which may be allowed under the new more stringent requirements). However, pending bubbles which prior to final EPA approval are changed to the extent that they no longer reasonably resemble the original proposal qualifying for pending bubble status (e.g., those which are substantially expanded in scope or changed to involve primarily different sources of emission reduction credit) will be considered new bubbles subject to all of the requirements of today's notice.

Bubble applications which were submitted to EPA Regions by states, but which were withdrawn (or rejected) as inadequate under the 1982 policy, are not "pending." These bubbles, if reformulated and resubmitted, must meet all requirements of today's notice applicable to new bubble applications.

(c.) *No Double-Counting of Reductions.* At minimum, to be considered surplus an emission reduction cannot already have been claimed as part of a demonstration or updated emission inventory by any state air quality plan or have been used by the source to meet any other regulatory requirement. Double-counting of reductions—granting credit for the same emission reduction, e.g., once to the state as part of its nonattainment SIP demonstration or PSD baseline, and a second time to a source for use in an emissions trade, must be addressed in the following situations.

(1) *Crediting Pre-Existing Emission Reductions.* In *nonattainment areas* credit generally cannot be granted for emission reductions made before monitoring data is or was collected for use in current SIP planning. Because monitored ambient levels *already* reflect these emission decreases, such decreases may have been assumed in calculating the further reductions needed to attain ambient standards. States must clearly show that the existence of these reductions has been accounted for in their calculations in order to gain credit for these reductions.

States should also clearly identify the inventory baseline date before which reductions will not qualify for credit. The earliest acceptable baseline date would normally be the year of the most recent emissions inventory used in planning Part D SIP revisions under the Clean Air Act Amendments of 1977.[12] Where emissions inventories or other data are updated for tracking RFP and correction of Part D SIPs, the new inventories must treat banked emissions reductions as current actual emissions "in the air" at the source where created, so that corrected SIPs do not inadvertently rely on these prior reductions and cause them to be lost for use. If inventories do not treat these banked emissions as "in the air," or if they are otherwise relied upon for SIP planning purposes, such reductions can no longer be credited for trading.[13]

In primary nonattainment areas which need but lack approved demonstrations of attainment, emission reductions achieved prior to application to bank or trade (whichever is earlier) will not be credited for use in bubbles. See section I.A.1.b.(1) above. Regardless of whether they meet other baseline tests, such reductions were not reasonably elicited by the opportunity to trade in a practical, objective sense determined by timing, and cannot be used to meet existing-source SIP requirements absent a demonstration.[14]

In attainment areas, reductions at *major stationary sources* which commenced construction after January 1, 1975 may be able to qualify for credit whether such reductions occurred before or after the PSD baseline triggering date. See 40 CFR 51.24(b)(13)(ii) (45 FR 52719–20; August 7, 1980). Other emission reductions (e.g., at minor sources) cannot qualify for credit where the PSD baseline date *is or has been triggered* and such reductions occurred prior to the trigger date, unless these reductions are not assumed in the PSD baselines. Since banked emission

[12] For baselines and base year dates in rural ozone nonattainment areas, see section I.A.1.a. above.

[13] In order to help avoid such results, states may wish to make sources responsible to report banked emission reductions when responding to the states' inventory reporting requirements.

[14] In all nonattainment areas, emission reductions achieved by shutting down or permanently curtailing an existing source prior to application for a new source permit cannot generally be used as *offsets.* See 40 CFR 51.18(j)(3)(ii)(c). EPA proposed on August 25, 1983 to remove this restriction. See 48 FR 38742, 38751. However, it remains in effect unless and until EPA takes final action on that proposal.

reduction credits must be considered to be "in the air" for all planning purposes, if the baseline date is triggered before banked credits are actually used, such banked credits will be considered as part of the baseline and will not consume increment when used in an emissions trade.

In attainment areas where the PSD baseline has not been triggered as of the date EPA or the permitting authority takes relevant final action on the trading transaction, reductions below current SIP or permit limits generally may be used without special restrictions in bubble or banking transactions, provided they are otherwise creditable and there is assurance that NAAQS will not be violated due to any potential increase in actual emissions.[16]

(2) *Crediting Reductions From Shutdowns.* Shutdowns are generally treated for purposes of emissions trading like any other type of emissions reduction.[16] For example, the same limitations on pre-existing reductions (section I.A.1.c.(1), above) apply to shutdowns where they apply to any other type of emissions reduction. However, under current federal New Source Review requirements for major sources, shutdowns that occur prior to application for a new source permit can be used as offsets only for equipment replacing on-site productive capacity which was shut down.[17]

Shutdowns are of general concern with respect to double-counting where a state may have relied directly or indirectly on shutdowns in a SIP demonstration of attainment. (Where a primary nonattainment area needs but lacks an approved demonstration of attainment, the progress requirements of subsection I.A.1.b. above apply to bubbles involving shutdowns as well as to bubbles involving other types of emission reductions. These requirements generally bar use of reductions from shutdowns which occurred before application to bank or trade.)

In general, a state may credit reductions from shutdowns if the SIP has not already assumed credit for these reductions in its attainment strategy. So long as reductions from shutdowns have not already been counted in developing an area's attainment strategy, they are a potential source of surplus reductions.

Some SIPs assumed a set quantity of reductions from the overall difference in emissions due to new plant openings and existing plant shutdowns. These SIPs incorporated into their attainment strategy a net "turnover" reduction in emissions because new sources are generally cleaner than those that shut down. Double-counting would occur if a specific source received credit for reductions from such a shutdown, since that reduction was already assumed in the SIP's demonstration of attainment.

These states have at least two options for granting sources credit for shutdowns without this kind of double-counting. First, they may reexamine any "turnover" reductions relied on in their SIP and decide not to take credit for these reductions. This approach would require EPA approval of a revised demonstration of attainment or a SIP revision showing consistency with the existing demonstration. Such an action can be processed by EPA concurrently with a bubble or generic rule. Alternatively, these states may allow credit only after the total quantity of shutdown reductions relied on in the SIP has occurred.

In all cases where net turnover reductions have been quantified and relied on as part of attainment demonstrations, states which seek to grant shutdown credit for use in trading must be prepared to show clearly and unequivocally on the basis of SIP documents or tracking that the credit has not been double-counted or otherwise relied on for SIP planning purposes.

(3) *Use of Banked Credits From Shutdowns or Other Actions for Bubble Purposes.*[18] In primary nonattainment areas which need but lack approved demonstrations, ERCs intended for bubble purposes may generally be banked and used with the same lowest-of-actual-SIP-allowable-or-RACT-allowable baseline used for other bubble transactions.[19] This baseline should be applied as of the time banked credit is or was initially sought, with the 20% reduction applied to both sources in the trade if these credits are later used for bubbles. The lowest-of-actual-SIP-allowable-or-RACT-allowable baseline plus the 20% discount will also apply to the source using that credit in a bubble, as of the time of such subsequent bubble application.

Banked credits produced by *shutdowns and curtailments* may be used for bubbles in these areas on the same terms as use of other banked credits, provided their use is subject to stringent qualitative review to assure technical, legal, and programmatic consistency with SIP planning goals (e.g., avoidance of double-counting and "shifting demand"). This review will not examine any source's motivation in shutting down a facility or curtailing production. However, the source must show that a written application was submitted to make the shutdown/curtailment state-enforceable through or concurrent with use of a formal bank or informal banking mechanism, prior to the time the shutdown/curtailment occurred. Submittal of such an application to make proposed reductions from a shutdown or curtailment state-enforceable will constitute the relevant definition of "application to bank" for timing purposes related to the evaluation of bubble credits in these nonattainment areas (see section I.A.1.b(1) above).[20] The shutdown/curtailment must be made *federally* enforcement when it is used in a bubble.

Use for bubble purposes of *nonbanked* credits resulting from current shutdowns or curtailments will be allowed in these areas if the lowest-of-actual-SIP-allowable-or-RACT-allowable baseline plus the 20% additional reduction are applied to determine the amount of credit.

No special baseline or additional reduction requirements will apply to these credits in other areas.

d. Multiple Use of ERCs. Once surplus reductions are credited, states must prohibit their multiple use. The same pound of reduction must not be simultaneously banked by two different entities or used to satisfy two different regulatory requirements at the same time. To prevent these results, states must adopt an ERC registry or equivalent means of accounting for the creation, banking, transfer, or use of ERCs. See Section I.C.6 below. States must also ensure that past reductions used in bubble, netting or offset transactions are not later credited in newly-established banks.

[16] However, reductions at sources other than major stationary sources on which construction commenced before January 1, 1975 may not be used to balance increases at such pre-1975 major sources.

[17] See n. 14 above.

[18] For use of banked shutdown credits for bubbles in primary nonattainment areas needing but lacking approved demonstrations, see section I.A.1.c(3) below.

[19] ERCs used for *netting* and *offset* purposes (including those derived from banks) must comply with relevant NSR and PSD requirements.

[20] For further discussion related to the use of banked credits in these nonattainment areas, see section I.C.9. below.

[20] For sources which banked or sought to bank credits from shutdowns or curtailments in these nonattainment areas *prior to publication of today's notice*, written evidence must be provided showing either that an application to deposit the credits in a formal bank was submitted to the state prior to the time the shutdown/curtailment occurred, or that the state acknowledged, before or at the time the shutdown/curtailment occurred, both the existence of that shutdown/curtailment, and the source's intent to use the resulting credits in a future trade.

e. Reductions from Uninventoried Sources. Sources not included in an area's SIP emission inventory may apply for emission reduction credit. Such applications may enhance state air quality planning capabilities. Where such sources are already subject to SIP emission limits, those emission limits must be used as the basis for determining emission reduction credit, unless a more stringent baseline would normally be required (see sections I.A.1.a. and I.A.1.b. above).[21]

In *attainment areas* states may grant bubble credit to sources regardless of whether they have been included in an inventory, based on use of actual values for each of the three baseline factors, so long as those sources are not subject to lower allowable values for those factors. Allowable values, when higher than actual values, may alternatively be used in calculating the baseline, provided sources show that any resulting potential increase in actual emissions does not jeopardize applicable ambient standards, PSD increments, or visibility. (See 40 CFR 51.24 and 52.21 for specific requirements concerning PSD increments and visibility.)

In *nonattainment areas with approved demonstrations of attainment,* whether sources not on the inventory can create bubble credit will turn on how the approved demonstration of attainment was designed. Some states first monitored ambient values to determine required reductions for the SIP, then required a proportionate reduction in emissions from certain general source categories (i.e., a "rollback") in order to attain. States may grant credit for reductions from uninventoried sources in these areas in at least two ways.

(1) They could require the average of percentage reductions imposed on all inventoried sources, and grant credit only for reductions in excess of that amount. In this case, baseline emissions should be based on the percentage reduction in actual emissions for the year in which the baseline data for the rollback was gathered. Where such sources are already subject to lower SIP emission limits, those limits must be used to determine credit.

(2) They could require the source to use a RACT emission rate and the lower of actual or allowable capacity utilization and hours of operation to calculate the baseline, and grant credit only for reductions below that baseline. This RACT baseline would have to result in a reduction at least as great as the percentage reduction assumed in the rollback. As discussed above, where sources are already subject to lower SIP emission limits, those limits must be used as the basis for determining credit.

Other areas developed SIP demonstrations based on dispersion models rather than area-wide proportionate reductions. To the extent these SIPs demonstrated ambient attainment through reductions required from specific inventoried sources, incorporated emissions from uninventoried sources in the background or area source totals, and projected attainment by modeling the effects of those reductions, reductions from sources not on the inventory can be credited using the lower of actual or allowable values for each of the baseline factors.

In *primary nonattainment areas which need but lack an approved demonstration of attainment,* the progress requirements of Section I.A.1.b. above apply to bubbles which seek to use credit from uninventoried sources. These include a lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baseline. Where a RACT emission limit has not already been adopted for an uninventoried source, such a limit must be agreed upon between the source, the state and EPA before the baseline can be determined.

States which grant credit from uninventoried sources not subject to permits, offset requirements, or enforceable production constraints should address the possibility that reductions from one such source may be followed by equal or greater increases from similar nearby sources due to shifting demand. These states must clearly demonstrate that ERCs from the uninventoried source are surplus and permanent. Interested parties should be aware that some uninventoried sources may not readily meet these tests. For example, reductions resulting from shutdown of a dry cleaner will generally not be creditable, unless the state subjects such sources to offset requirements or other measures addressing this problem. However, reductions due to improved control at such a dry cleaner would generally be creditable, since shifting demand is not implicated.

Baselines for Open Dust Trades. Fugitive dust regulations generally consist of generic work practices and operating procedures. The specifics of a fugitive dust program are generally contained in an operating permit or fugitive dust program. It is generally not possible to identify the appropriate emissions baseline from a general state open dust regulation. Therefore, for any open dust trade a negotiated RACT baseline must generally be agreed upon between the source, state and USEPA for the open dust source in question.

2. Alternative Emission Limits Must Be Enforceable

Each bubble, netting, offset or banking transaction must be approved by the state and must be federally enforceable at the time an ERC is used. Reviewing authorities may be able to use existing procedures (including preconstruction permits issued by states pursuant to 40 CFR 51.18, 51.24, 51.307 or 52.21) or EPA-approved generic rules to make reductions federally enforceable. The former possibility exists because permits issued under a federally-approved new source review program are federally enforceable. However, many preconstruction permit programs have been federally approved strictly for sources subject to NSR, and therefore may not be capable of use for transactions that do not trigger NSR requirements, or that involve sources not already subject to preconstruction permits.

With respect to the latter possibility, any enforceable compliance instrument imposing emission limits within the scope of an EPA-approved generic rule is deemed federally enforceable as part of the SIP.

Emission limits established by a trade must be incorporated in a compliance instrument which is legally binding and practicably enforceable by EPA.

Trades involving individual SIP revisions automatically satisfy this requirement. For trades under generic rules a compliance instrument culd take the form of an agreement between the source and state, a preconstruction permit (if one is applicable), a consent decree, a state operating permit, or any other compliance instrument judicially enforceable by the state. To assure state enforceability, the generic rule should state that sources subject to these instruments are required to meet the emission limits contained therein. Such instruments would then automatically become federally enforceable via an EPA-approved generic rule, provided they are issued as, or part of, the compliance instrument specifically required by the generic rule.

Compliance instruments must ensure that enforcement personnel do not have

[21] Where a given source was not subject to mandatory RACT regulation due to the fact that it was not included in the inventory (e.g., where no RACT regulation for a source category was adopted because the state, unaware of the source, issued a declaration that no source existed in that source category, or where an uninventoried, non-CTG source of greater than 100 TPY emissions is located in an ozone extension area), a baseline reflecting a negotiated RACT emission rate must be agreed upon between the source, the state and EPA for the uninventoried source in question.

to test simultaneously every emission source involved in a trade. This generally requires source-specific emission limits. However, states may use pre-specified combinations of source-specific emission limits which are enforceable. States may also use an overall limit that applies to a group of emission sources which can be evaluated simultaneously, where there is a reliable and enforceable method of determining compliance (e.g., through production records, input factors, or other indirect means, or through use of a continuous emissions monitor.) See, e.g., 45 FR 80824, December 8, 1980.

The compliance instrument should also specify applicable restrictions on hours of operation, production rates or input rates; enforceable test methods for determining compliance; and necessary recordkeeping or reporting requirements. To be enforceable, these limits must state the minimum time period over which they will be averaged (e.g., lbs/hour, lbs/MBtu averaged over 24 hours, production rate/day).[22] Unless such enforceable restrictions are or have been placed on capacity utilization and hours of operation, or on overall emissions, maximum values for capacity utilization and hours of operation must generally be used in calculating post-trade emission limits and in ambient modeling of the post-trade case.

3. All Reductions Must Be Permanent

All emission increases in a trade must be compensated by emission reductions that are permanent (i.e., assured for the life of the corresponding increase, whether unlimited or limited in duration).[23] This requirement may generally be met by enforceable permit limitations confirming the amount and duration of the decrease. If reductions with a limited life are used, the life of the trade must be limited accordingly, so that the trade will automatically terminate with expiration of those reductions. The date of termination may be specified in the notice of approval. Alternatively, source(s) may agree to provide formal written notification to EPA and the state before such reductions may be discontinued and the trade terminated.

Permanence may present special but resolvable "shifting demand" problems for reductions from small sources not subject to permits, offset requirements, or enforceable production constraints. States which grant credit from these source categories must address the possibility that reductions from one source may result in equal or greater increases from similar nearby sources.[24]

In order to use, in a bubble trade, emission reduction credits derived from reductions in operations beyond those consistent with the baseline (e.g., a reduction from 3 to 2 workshifts), a source must have its preconstruction permit or other federally enforceable compliance instrument altered to reflect the curtailment in production records reflecting such curtailment (see section I.A.2 above).[25] Future increases in production beyond the permit amount may trigger new source review or require approval of a new emissions trading application which includes compensating emission reductions. As with other types of noncompliance, any source which exceeds permitted production limits would be subject to potential noncompliance penalties.

4. All Reductions Must be Quantifiable

Before an emission reduction can be credited it must be quantified. This generally means the state must establish a reliable basis for calculating the amount and rate of the reduction and describing its characteristics.

a. Calculating the Reduction. To quantify the amount of emission reductions eligible as ERCs, emissions must be calculated both before and after the reduction (i.e., assuming the post-reduction limits). Although many different methods of calculation are available (e.g., emission factors, stack tests, monitored values, production or process inputs), the same method and averaging time should generally be used to quantify emissions both before and after the reduction.[26]

b. Describing the Reduction. If an ERC will be used at the time of creation, only characteristics necessary to evaluate that proposed use need be described. Where the ERC will be banked and its eventual use is not yet known, a more detailed description should be provided in order to facilitate its later evaluation for a particular use.

B. Using Emission Reduction Credits

This section explains the substantive and procedural principles applicable to use of ERCs, primarily for existing-source bubbles. Many of these principles also apply to use of ERCs in netting or offset transactions. However, those transactions are governed by EPA's New Source Review regulations (40 CFR Parts 51 and 52) or state rules reflecting them.

1. *Substantive Principles for Using ERCs*

a. Emissions Trades Must Involve the Same Pollutant. The Clean Air Act requires states to develop separate plans to attain and maintain the national ambient air quality standard for each criteria pollutant. Thus, all individual bubble, netting or offset transactions must involve the same pollutant. Only reductions of particulates can substitute for increases of particulates, reductions of SO_2 for increases in SO_2, etc.

b. All Uses of ERCs Must Satisfy Ambient Tests. Because the Clean Air Act requires that all areas throughout the country attain and maintain ambient standards, protect applicable PSD increments, and protect visibility in mandatory Federal Class I (PSD) areas, bubbles must generally be equivalent in ambient effects to the baseline emission levels which they replace.[27] In *nonattainment areas*, use of ERCs cannot create a new violation of an ambient standard or delay the planned removal of an existing violation. In *attainment* areas, use of ERCs cannot violate an increment or ambient standard. Use of ERCs in either type or area cannot adversely affect visibility in any mandatory Federal Class I area.

The ambient effect of a trade generally depends on the dispersion characteristics of the pollutant involved.

VOC or NO_x Trades. Trades involving VOC or NO_x need consider only emissions. Since the ambient impact of these pollutants is areawide rather than localized, one pound of increased emissions will be balanced in ambient

[22] Many state permits or permit procedures may need revisions to assure that they provide adequate compliance information. However, such revisions need only occur on a case-by-case basis as individual trades are approved.

[23] Permits or other compliance instruments for limited-duration trades must clearly state such limits.

[24] States can address such potentially "shifting demand" among such sources as dry cleaners, paint shops and gas stations by, for example (1) prohibiting creation of ERCs due to shutdown or curtailment of such small sources; (2) limiting ERCs from small sources to categories determined not to be subject to shifting demand; or (3) requiring offsets for increases in emissions from such small sources. Cf. section I.A.1.e. above.

[25] Under EPA's NSR regulations, prior curtailments are subject to the same restrictions for offset purposes as prior shutdowns. See n. 14 above.

[26] In general, states may not approve VOC trades in ozone nonattainment areas where such trades would incorporate averaging times longer than one day. However, where VOC sources show that daily VOC emissions cannot be determined or application of RACT is not technically or economically feasible on a daily basis, longer averaging times may be permitted. See Appendix D.

[27] In primary nonattainment areas needing but lacking an approved demonstration of attainment, bubbles must achieve a net air quality benefit. See Section I.A.1.b. above.

effect by one pound of decreased emissions within the same broad geographic area, and the precise location of those increases and decreases ordinarily does not matter. For VOC and NO_x such "pound-for-pound" trades may therefore be treated as equal in ambient effect where all sources involved in the trade are located in the same control strategy demonstration area or the state otherwise shows such source to be sufficiently close that a "pound-for-pound" trade can be justified.[28]

Particulate Matter, SO_2, CO or Lead Trades. Ambient considerations are critical for trades involving emissions of sulfur dioxide, particulates, carbon monoxide, or lead, whose air quality impacts may vary with where the emission increases and decreases occur. For example, one hundred pounds of ERCs for such a pollutant created at one source may balance the ambient impact of a 100-pound increase at a source nearby, but may only balance the effect of an 80-pound increase at a source further away. In addition to distance between sources, plume parameters, pollutant characteristics, meteorology, and topography will also affect the ambient impact of such trades.[29]

This Document authorizes the use of four alternative methods of determining ambient equivalence, with the degree of required modeling linked to the likely ambient impact of the proposed trade. The following sections describe use of these alternatives to evaluate for approval many bubble or offset trades without full scale ambient dispersion modeling.[30] Use of these alternatives under generic rules is discussed in section II below.

(1) *De Minimis.* In general no modeling is needed to determine the ambient equivalence of trades in which applicable net baseline emissions do not increase [31] and in which the sum of the emissions increases, looking only at the increasing sources, totals less than 25 tons per year (TPY) for particulate matter, 40 TPY for sulfur dioxide, 100 TPY for carbon monoxide, 40 TPY for NO_x (where visibility impacts are of concern), or 0.6 TPY for lead, after applicable control requirements. Such trades will have at most a *de minimis* impacts on local air quality because no net increase in emissions will be produced and the amount of emissions being shifted is less than designated significance levels in associated EPA regulations (see, e.g., 40 CFR 51.18(j)(1)(x) and 51.24(b)(23)(i)).[32]

(2) *Level I.* In general no modeling to determine ambient equivalence is needed if:

(a) The trade does not result in an increase in applicable net baseline emissions;[33]

(b) The relevant sources are located in the same immediate vicinity (within 250 meters of each other);

(c) No increase in baseline emissions occurs at the source with the lower effective plume height as determined under EPA's *Guidelines on Air Quality Modeling;*

(d) No complex terrain [34] is within the area of significant impact of the trade [35] or 50 kilometers, whichever is less; [36]

(e) Stacks with increasing baseline emissions are sufficiently tall to avoid possible downwash situations, as determined by the formula described at 50 FR 27892 (July 8, 1985) (to be codified at 40 CFR Part 51); and

(f) The trade does not involve open dust sources.

For such Level I trades it can reasonably be assumed that "pound-for-pound" trades will produce ambient effects equivalent to those which EPA-approved air quality models would predict. Therefore modeling to determine ambient equivalence is not required.

Trades between fugitive process sources and stack sources (i.e., process-for-process or process-for-stack) can acceptably be evaluated and approved under Level I as long as the maximum distance between any emitting sources in the trade is less than 250 meters and all other Level I criteria are met.

(3) *Level II.* Bubble trades which are neither *de minimis* nor Level I may nevertheless be evaluated for approval based on modeling to determine ambient equivalence limited solely to the impacts of the specific emission sources involved in the trade, if there is no increase in applicable net baseline emissions,[37] if the potential change in emissions before and after the trade will not cause a significant increase in pollutant concentrations at any receptor for any averaging time specified in an applicable ambient air quality

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[28] The discussion in this paragraph does not apply to NO_x trades involving visibility impacts of elevated plumes.

[29] The ambient equivalence considerations elaborated in this and following paragraphs also apply to NO_x trades involving visibility impacts of elevated plumes. See n. 28 above.

[30] Modeling is generally not required for new source netting, whose purpose is to avoid expending resources where adverse emission or ambient impacts from changes at a source are extremely unlikely. See, e.g., 45 FR 52677–78 (August 7, 1980).

[31] Interested parties should, however, be aware that in some circumstances modeling may be required to justify using certain emissions baselines, prior to the trade. Where a bubble in a *nonattainment* area seeks to employ allowable values greater than corresponding actual values in the calculation of baseline emissions, and where such allowable values are not shown to be used or reflected in an approved demonstration, a full Level III modeling analysis will be required. Where a bubble in an *attainment* area seeks to employ allowable values greater than corresponding actual values in the calculation of baseline emissions, and where such allowable values are not shown to be used or reflected in an approved demonstration, a Level II modeling analysis (see below) using actual emissions for the pre-bubble case will be required unless, for bubbles processed as case-by-case SIP revisions, the Region determines that additional technical support is necessary to protect applicable standards or increments. Where allowable values are used to calculate baseline emissions for such a case-by-case SIP revision bubble in an attainment area where the PSD baseline has been triggered, the Region will require the technical support necessary to protect PSD increments.

Where allowable values higher than actual values are not shown to be used or reflected in an approved demonstration, states that wish to authorize their use in attainment areas *under generic bubble rules* must either state, or develop replicable procedures addressing, background values and how they will be evaluated in conjunction with the actual changes in ambient concentration predicted by the Level II analysis. These steps must be sufficient to protect standards and increments and must be approved by EPA as part of a generic rule.

For further discussion regarding calculation of baseline emissions and related modeling requirements, see Section I.A.1. above and Appendix B below.

[32] This paragraph should not be construed to imply that *new* sources and modifications need not meet all applicable requirements, including those specified under 40 CFR 51.18 or parallel EPA-approved state rules.

[33] See n. 31 above.

[34] Complex terrain is broadly defined by EPA as terrain greater in height than the physical stack height of a source. For bubble purposes, this definition is applicable only to sources with increasing baseline emissions.

[35] For guidance on determining "area of significant impact," see Appendix E below. The graph in Appendix E, or EPA-approved alternative approaches, may be incorporated in generic rules to make this aspect of Level I analysis replicable and operational. See Section II below.

[36] Generally, trades involving complex terrain as defined above may not be exempt from modeling under a Level I analysis. However, EPA will consider on a case-by-case basis additional criteria for determining whether a particular trade involving complex terrain, but otherwise meeting the requirements specified above, does not present a problem of potential plume impaction and may be approved under a Level I analysis. These additional criteria would include such factors as source height and emission rates, distance between stacks and elevated features, rate of topographical rise, and other considerations which may be appropriate for the particular geographic area. States are encouraged to work with EPA to determine where and how such additional criteria can be developed and applied to individual trades.

[37] See n. 31 above.

standard,[38] and if such an analysis does not predict any increase in ambient concentrations in a mandatory Federal Class I area.[39] The change in concentration from the before-trade case to the after-trade case must in general be modeled using refined models such as MPTER and ISC for each appropriate averaging time for the relevant national ambient air quality standards for each receptor, using the most recent full year of meteorological data.[40]

(4) *Level III.* Full dispersion modeling considering all sources affecting the trade's area of impact is required to determine ambient equivalence if applicable net baseline emissions will increase as a result of the trade,[41] or if the trade cannot meet criteria for approval under *de minimis*, Level I or Level II.

However, a geographically limited Level III analysis may be used in some cases where a Level II analysis predicts one or more exceedances of the Level II significance values. While this analysis will be limited in terms of geographic scope, it must otherwise meet the modeling requirements for a full Level III analysis, including consideration of all sources affecting the limited geographical area. In many situations this approach may permit the receptor area to be smaller than the trade's entire area of impact. Because of the unique nature of each situation, the appropriate limited geographic area must be determined in accord with EPA guidelines on modeling, and through case-by-case evaluation.

Bubble trades are approvable under either type of Level III analysis if they do not cause a new violation of NAAQS or PSD increments, significantly contribute to or delay the planned removal of an existing violation, or adversely affect visibility in mandatory Federal Class I areas.[42]

This three-tiered modeling approach is both reasonable and conservative. It will assure that the ambient impact of trades is at least equivalent in effect to original SIP emission limits, while conserving government resources and shortening approval times for many individual trades.

c. Bubbles Should Not Increase Applicable Net Baseline Emissions. Ordinarily, bubbles may not result in an increase in applicable net baseline emissions. Such a bubble would require a case-by-case SIP revision, and may only be approved based upon a combined Level III and Level II modeling analysis (i.e., an analysis sufficient to show that all applicable requirements of a full Level III analysis (as described above) are met, and that the bubble would not result in any exceedance of significance values specified for a Level II analysis at any receptor for any averaging time specified in an applicable ambient air quality standard.[43]

Where such a bubble is proposed in a *nonattainment area*, the state must demonstrate that the trade is consistent with the progress demonstration under an approved demonstration of attainment, revise its EPA-approved progress demonstration as part of the proposed SIP revision, or otherwise show (e.g., by modeling and any necessary compensating emission reductions) that the proposed trade comports with the EPA-approved emissions and ambient progress demonstration.

d. Bubbles Should Not Increase Emissions of Hazardous or Toxic Air Pollutants. Under the Clean Air Act all sources must meet applicable section 112 (NESHAPs) requirements for control of hazardous air pollutants. Sources may neither use a bubble to meet these requirements, nor increase emissions beyond the levels they prescribe. Where a source wishes to generate or use emission reduction credit for a criteria pollutant, and where a NESHAPs pollutant is part of the criteria pollutant stream, the emissions baseline for emissions of the hazardous pollutant from that source would be the lower-of-actual-or-NESHAPs-allowable emissions of that pollutant, applied as of the time of application for credit. Where EPA has *proposed* to regulate a source category for emissions of a pollutant under section 112, but has not yet promulgated a NESHAP for that source category, the proposal will serve as the interim guideline for evaluating the potential effects of any proposed emissions trade involving sources to which the proposed standard would apply. The emissions baseline for such a pollutant emitted by a source subject to the proposed NESHAP would be lower-of-actual-or-proposed-NESHAPs-allowable emissions for that pollutant.

In general, such trading proposals will be approved so long as they (1) result in emission limits *for each source* emitting the relevant pollutant which are equivalent to or less than those that the approved NESHAP requires or the proposed NESHAP would require if promulgated, (2) rely only on reductions below actual or allowable levels (whichever is less) of that pollutant, and (3) take place within a single plant or contiguous plants.

Where a pollutant has been *listed* under section 112 or EPA has published a Notice-of-Intent-to-List, but no NESHAP has been promulgated or proposed for a source which emits that

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[38] In determining "significant" impact for Level II *bubble* trades, states may use the following significance values to identify trades whose potential ambient impact need not be further evaluated before approval:

10 $\mu g/m^3$ for any 24-hour period for particulate matter;

5 $\mu g/m^3$ for any annual period for particulate matter;

13 $\mu g/m^3$ for any 24-hour period for SO_2;

46 $\mu g/m^3$ for any 3-hour period for SO_2;

3 $\mu g/m^3$ for an annual period for SO_2;

575 $\mu g/m^3$ for any 8-hour period for CO;

2300 $\mu g/m^3$ for any 1-hour period for CO;

0.1 $\mu g/m^3$ for any 3-month period for Pb.

See 45 FR 52709 (August 7, 1980). For *offset* transactions, any required modeling must follow procedures consistent with EPA's new Source Review regulations in 40 CFR 51.18 or Part 51, Appendix S, or parallel EPA-approved state regulations. "Significant" impact under 40 CFR Part 51, Appendix S is defined as 1 $\mu g/m^3$ annual average for particulates, SO_2 or NO_2; 5 $\mu g/m^3$ 24-hour average for particulates and SO_2; 25 $\mu g/m^3$ 3-hour average for SO_2; and 0.5 mg/m^3 8-hour average and 2 mg/m^3 one-hour average for CO.

[39] However, a bubble ordinarily may not be approved under Level II where other evidence related to background—i.e., formally validated ambient air quality monitoring data or previously established background values—clearly indicates that the bubble would create a new violation of an ambient standard or PSD increment, or would delay the planned removal of an existing violation.

[40] Other techniques may be approved where sources show they equally well protect NAAQS, applicable PSD increments, and visibility. For example, in limited circumstances conservative screening models may be acceptable in lieu of MPTER and ISC. In such cases, use of a full year of meteorological data may not be necessary. Such screening models may be acceptable where: (a) The screening model shows that all the emissions from the stack(s) with increasing emissions would not produce exceedances of the Level II significance values described in n. 38 above, or (b) the stack parameters at the stack(s) with increasing emissions do not change *and* the screening model shows that the increase in emissions at the increasing stack(s) would not produce exceedances of these significance values.

[41] See discussion in I.B.1.c. below.

[42] Where a Level III modeling analysis submitted to support a voluntary trading application indicates an exceedance of an ambient requirement, EPA will review such applications on a common-sense case-by-case basis, seeking to encourage disclosure of such exceedances and avoid undue delay of decisions on the trade, while adequately ensuring protection of public health, the integrity of the SIP process (including the state's prerogatives in determining how to remedy nonattainment), and the prompt and effective remedy of any condition of nonattainment. In its review, the Agency will take into account such factors as the degree of exceedance, the contribution of the trading sources and the trade itself to the exceedance, and the degree to which such sources would be part of any solution remedying the exceedance.

[43] Where a proposed bubble increasing net baseline emissions cannot meet this test of ambient equivalence, it may not be approved as a bubble under the Emissions Trading Policy. However, sources may still submit such revised limits for approval under the general requirements applicable to SIP revisions.

pollutant, states may generally allow trades consisting of equivalent increases and decreases of actual emissions of that pollutant within a single plant or contiguous plants. Once the relevant NESHAP is promulgated, every source, regardless of any previously approved trade involving emissions of that pollutant, must meet the requirements of that promulgation.

Where EPA has decided that one or more source categories which emit a listed pollutant do not require regulation solely because of limited national exposure, emissions of that pollutant will continue to be treated the same as emissions of any other pollutant listed under section 112.

Where EPA has issued a formal Notice-of-Intent-Not-to-List a pollutant under section 112, that pollutant will ordinarily be treated as non-hazardous. *However*, where the decision not to list or not to regulate was based on limited national exposure, but the individual risk was sufficiently high that EPA committed in the announcement of its decision to support (through some formal mechanism such as a Memorandum of Understanding (MOU)) state-level efforts to develop regulations, the pollutant will be treated as listed for trading purposes in order to assure that such state efforts are not compromised. The model for the intended scope of this classification is EPA's acrylonitrile decision. (50 FR 24319; June 10, 1985).

If a substance is neither listed nor regulated as hazardous under section 112, nor meets any of the other conditions specified above, but has been formally listed or regulated as toxic under any comparable health-based federal statute, the Administrator may consider this fact in evaluating trades which may increase emissions of that substance. This authority has not been delegated within EPA by the Administrator. See Clean Air Act section 301(a)(1), 42 U.S.C. 7601(a)(1).[44]

Exception. Trades which involve the pollutants addressed in this section but do not meet the special restrictions discussed above, may also be approved where surplus reductions in those pollutants compensate for increases in non-hazardous emissions of the same criteria pollutant. For example, a source emitting benzene may trade with a source emitting a non-hazardous VOC without meeting these special restrictions, if the benzene emissions are reduced as a result of the trade (i.e., "traded down"). As long as such a trade would not result in an increase in either actual or allowable emissions of a pollutant subject to the preceding paragraphs at any source, it would not differ in nature or requirements from a trade involving only non-hazardous VOC emissions.

e. Existing-Source Credits Cannot Be Used to Meet Applicable Technology-Based Requirements for New Sources. Under Clean Air Act section 111 and EPA implementing regulations, new affected facilities must satisfy technology-based New Source Performance Standards (NSPS), regardless of the attainment status of the area in which they are located. Under sections 165 and 173 and EPA implementing regulations, new or modified major sources must also satisfy technology-based control requirements associated with preconstruction permits. These requirements prohibit use of credits from existing sources to meet or avoid applicable NSPS, and bar use of such credits to meet applicable new source review requirements for best available control technology (BACT) in PSD areas, or lowest achievable emission rate control technology (LAER) in nonattainment areas.[45]

However, modifications of existing major sources in PSD and nonattainment areas with an EPA-approved "plantwide" definition of source can use "contemporaneous" reductions in actual emissions from within the same source to "net out of" New Source Review.[46] Under such "netting," sourcewide increases in potential emissions that do not exceed designated levels of significance (see 40 CFR 51.18(j)(1)(x), 51.24(b)(23), and 52.21(b)(23)) will not be considered "major modifications" of the source under 40 CFR 51.18, 51.24, 51.22, 51.307, 52.26, or 52.27. Thus, while these source changes must still meet applicable NSPS, NESHAPs, preconstruction applicability review requirements under 40 CFR 51.16 (a)–(h) and (l), and SIP requirements, they are not subject to new source review requirements for major modification because they are not considered "major."[47]

f. Trades Involving Open Dust Emissions. Trades involving open dust sources of particulate emissions may be approved through case-by-case SIP revisions based on modeled demonstrations of ambient equivalence. Sources proposing such trades must commit, as part of the trade's approval, to (i) undertake a post-approval monitoring program to evaluate the impact of their control efforts, and (ii) make further enforceable reductions if post-trade monitoring indicates initial open dust controls do not produce the predicted air quality results.

g. Interstate Trades. EPA will approve trades which involve sources located in neighboring states where such trades meet the criteria below and all other approval criteria applicable under today's notice. Where state trading requirements differ, EPA will require that trades with increasing and decreasing sources in different states meet the substantive requirements of the more stringent state. In general, in order to avoid complex accounting problems, EPA will deem ERCs created in another state to contribute to progress in the state where used, to the extent of that use. Such trades must be accomplished through case-by-case SIP revisions.

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[44] Trades involving emission streams partially or wholly composed of any pollutants subject to special considerations under this section must meet two separate and distinct tests to be approved. First, such trades must be approvable under the criteria and principles which apply to all trades, as discussed throughout this policy (i.e., such trades must meet baseline and other requirements for the relevant criteria pollutant). Second, such trades must be approvable with respect to the hazardous pollutant fraction of the criteria pollutant emission stream. This means that there must be no net increase in emissions of the pollutants addressed in this section, as a result of such trades. Where a NESHAP has been promulgated or proposed, the baseline for determining whether such an increase has occurred is the lower-of-actual-or-NESHAPs-allowable emissions for the hazardous component of the trade, for the source which emits that component. The promulgated or proposed NESHAP limit not only is used to define the allowable emissions for that source, but serves as an absolute ceiling on the source as well. Where a NESHAP has not yet been promulgated or proposed, the baseline for determining whether such an increase has occurred is generally actual emissions for the hazardous pollutant component of the trade. But cf. today's Policy Statement at n. 6.

[45] Today's notice does not address whether or under what circumstances facilities subject to NSPS, BACT or LAER may surpass applicable permit limits reflecting such requirements in order to create credits for existing-source trades.

[46] "Contemporaneous" means a reasonable period for accumulating increases and decreases in emissions, as specified by the state. See 40 CFR 51.18(j)(1)(vi) and 51.24(b)(3)(b) (ii).

[47] Netting also applies under the narrower "dual definition" of "source" in certain circumstances. For example, firms may use reductions within the plant to compensate for increases at several emitting units which, while not individually significant, might otherwise add up to a significant increase plantwide.

Under current EPA regulations, if a nonattainment area is subject to a moratorium on new preconstruction permits for major sources or modifications and the area does not have an approved New Source Review program, then the area automatically uses a plantwide definition. See 40 CFR 52.24.

EPA's general expansion of opportunities for states to use the plantwide source definition for certain nonattainment areas (49 FR 50766, October 24, 1984) was affirmed by the U.S. Supreme Court on June 25, 1984. *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 104 S. Ct. 2778, 14 ELR 20507, *overruling Natural Resources Defense Council, Inc. v. Gorsuch*, 685 F.2d 718, 12 ELR 20942 (D.C. Cir. 1982).

h. Trades Near PSD Class I Areas. EPA or a state operating under a generic rule must notify the Federal Land Manager if an emissions trade will take place within 100 kilometers of a PSD Class I area. Notification must occur early enough in the review process to allow at least 30 days for the submittal of comments before the trade will be approved by the reviewing authority.

Where a bubble within 50 kilometers of a PSD Class I area is submitted to EPA as a case-by-case SIP revision, the Region may call for additional technical support, beyond the applicable requirements of the modeling screen described in section I.B.1.b. above, if deemed necessary to protect air quality in the Class I area.

i. Effect on Trades of Subsequently-Discovered Clean Air Act Problems: Revisitation Considerations. If ambient violations are discovered in an area where EPA has approved a trade, or if other violations of Clean Air Act requirements are discovered in that area, sources in the trade should be aware that they are potentially subject to requirements for additional emission reductions, just as are all other sources in the area.**

** While sources involved in a trade, like all other sources, may be subject to requirements for additional emission reductions, neither previous trades approved by EPA or by states under EPA-approved generic rules, nor emission reduction credits used as part of a bubble, offset or netting action, should be terminated.

Such termination could occur, for example, where two sources in a given source category were subject to pre-bubble mass emission limits of 100 TPY each and post-bubble limits of 50 TPY and 150 TPY respectively. Assume the state imposes a new category-wide regulation which would normally limit those sources to 40 TPY each. In this case, the first source should be required to meet the new 40 TPY limit (i.e., it should be required to produce additional reductions of 10 TPY), while the second source should be subject to a new limit of 90 TPY (i.e., a level reflecting the continued existence of the 50 TPY emission reduction credit). Termination of the emission reduction credit would occur either by requiring the first source to produce additional emission reductions of 60 TPY (i.e., more than its current level of emissions), or the second source to meet the 40 TPY limit. Either of these results would undermine the purpose of today's notice by eliminating the predictability required for generation or use of ERC's. They could also penalize trading sources for taking environmentally beneficial measures sooner than required, since it would often be more difficult to achieve the new reductions than had earlier voluntary steps not been taken.

For these reasons, EPA urges states not to take such credit-terminating actions unless there is no other practical way to satisfy the requirements of the Clean Air Act.

Today's procedures for deposit and use of banked credits already address additional state emission reduction needs in the context of banking (see section I.C.9. below). States should, however, account for all previous trades and previously granted emission reduction credits in estimating emission reductions resulting from new control strategies, in order to avoid problems due to double-counting.

2. Procedural Steps for Using ERCs

Bubble trades may be implemented through individual SIP revisions or state generic rules. This section describes principles applicable to either procedure. General principles for generic rules are addressed in Section II below. Special considerations for trades which require individual SIP revisions are addressed in Section III.

a. Effect of Existing Compliance Schedules. EPA's 1979 bubble policy required that sources be subject to binding compliance schedules based on original SIP emission limits before being eligible to apply for bubbles. Because of the time required to process bubble applications as case-by-case SIP revisions, this requirement tended either (a) to discourage sources faced with tight milestones for the installation of conventional control equipment from pursuing bubble applications, where they had agreed in good faith to SIP compliance schedules before discovering bubble opportunities, or (b) to discourage sources from agreeing to any compliance schedule until they had fully examined bubble opportunities.

Today's policy allows an application to be filed though the applicant is not subject to compliance schedules based on original SIP emission limits, so long as that applicant agrees to emission limits established as part of a complete bubble application. Sources which are already subject to binding compliance schedules should, however, be aware that submittal or proposed approval of a bubble application does not suspend their obligation to comply with such schedules. Such schedules and existing SIP requirements remain applicable and enforceable until the bubble is finally approved and the schedule has been modified accordingly.

Sources seeking trades should note that they remain subject to enforcement of existing (pre-trade) SIP limits until the bubble is approved. EPA will use the same principles and procedures for deciding whether to initiate enforcements actions in these circumstances as the Agency applies to any other source which is subject to a proposed SIP revision.

Under established EPA policy, regulated sources must be subject to an applicable enforceable emission limit at all times. Accordingly, sources which have approved bubbles with emission limits effective at future date and which are not in compliance with their pre-trade limits, may be subject to enforcement action, which could include penalties based on a failure to meet the pre-trade limits. Sources in such situations may wish to minimize the chance that capital expenditures will be required to meet pre-trade limits, either by (a) agreeing to post-trade compliance dates which are substantially similar to their pretrade compliance dates, or (b) accelerating their compliance with post-trade limits.

In accord with the general principle that bubbles should be treated neither more nor less stringently than other SIP actions, implementation of today's policy will be neutral with respect to EPA enforcement of pre-trade emission limits. This means that EPA will not specifically target for enforcement action non-compliant sources seeking to use a bubble either to come into compliance or to restructure traditional compliance. However, it also means that EPA will not withhold or defer enforcement simply because a source is seeking alternative emission limits through a bubble. In exercising its enforcement discretion, EPA will apply the same considerations to noncompliant sources which seek to comply through bubbles as to those which do not.**

b. Extensions of Compliance Deadlines. States may modify or extend compliance schedules or deadlines for individual sources on a case-by-case basis in conjunction with bubble approvals. Such modifications or extensions must be consistent with the requirements of 40 CFR 51.15. Compliance schedules for sources in *nonattainment* areas cannot be extended beyond the statutory date for attainment, and applicable compliance milestones must be specified and met for each year of the revised or extended compliance schedule. Because an extension will usually require a revision of the state's progress demonstration, such approvals must ordinarily be submitted as SIP revisions.

** Parties contemplating bubbles involving the trade of emission reduction credits from one firm to another should be aware that when the credits being provided by the first firm are the result of emission limits with a future compliance date, the obligation to meet pre-trade limits remains with the second firm (which may face enforcement action, including cash penalties, for failure to comply with those pre-trade limits) until the time specified for the first firm to achieve the reductions necessary for compliance under the bubble. The first firm's failure to achieve required bubble reductions on schedule may thereafter result in enforcement action (including cash penalties) against that firm. *However,* this paragraph should be read in conjunction with the general principle articulated above that EPA implementation of today's policy will be neutral with respect to enforcement of pretrade limits.

In *nonattainment areas*, states which wish to give sources more time to implement bubbles by granting compliance extensions must receive EPA approval of the extension through case-by-case SIP revisions. EPA will evaluate the time extension portions of these SIP revision packages in accordance with the Agency's normal procedures for review of time extensions, including consistency with the Act's requirements of expeditiousness, reasonable further progress, and attainment and maintenance of ambient air quality standards. Sources should be aware that disapproval of the time extension portion may result in disapproval of the entire package (i.e., both post-trade limits and the time extension) or only part of it, depending on whether the state views these components of the proposed SIP revision as separable.

In *attainment areas*, states may continue to grant compliance extensions without case-by-case SIP revisions, as part of bubble approvals under a generic rule. Such generic compliance date extensions may be granted in these areas only if EPA has approved the extension provision of the generic rule as adequate to comply with the Clean Air Act, including requirements for attainment and maintenance of ambient air quality standards.

c. Pending Enforcement Actions. A bubble cannot be approved for an individual emission source which is presently the subject of a federal enforcement action or outstanding enforcement order unless EPA (and where necessary the appropriate court) approves the proposal and any compliance schedule it may contain. "Federal enforcement action or outstanding order" includes notices of violation, civil actions filed under Clean Air Act section 113(b), criminal actions filed under section 113(c), notices imposing noncompliance penalties issued under section 120, administrative orders issued under section 113(a), or citizen suits filed under section 304 in which EPA has intervened if the source is subject to an administrative or judicial order.

This requirement need not preclude bubble approvals under generic rules, provided the rule specifies an appropriate mechanism for securing and recording EPA or court approval.[50] Sources should, however, be aware that such approvals cannot be finally effective until approved by the appropriate agency or court, and that they remain subject to original emission limits until such approval.

C. Banking Emission Reduction Credits

Emission reductions that are surplus, permanent, quantifiable and enforceable can qualify as emission reduction credits (ERCs) and be deposited in EPA-approvable banks. States may establish such banks by adopting appropriate rules to govern whether and how sources may own and hold surplus emission reduction credits for future use in bubble, offset or netting transactions.[51] Such banking rules may encourage sources to take measures to reduce emissions in advance of specific need for ERCs, resulting in lower transaction costs for those seeking offsets, bubbles, or partners for these transactions. States should, however, be aware that because an area's air quality situation or the status of its SIP may change in the future, failure to account for banked credits in emission inventories used for planning purposes may result in loss of those ERCs not treated as "in the air" (e.g., not included in any future SIP inventory or accounted for in any redesignation of the area to attainment), due to double-counting. Banking rules may protect such reductions in whole or in part as long as such protection is consistent with the Act's mandate to attain and maintain ambient standards while protecting PSD increments and visibility.

EPA-approvable banks can accept and evaluate requests to certify an ERC, serve as a clearinghouse for credits on deposit, and account for transfers and withdrawals of ERCs.[52] Banks can also: Register ERCs to ensure they are considered as current actual emissions in future planning (thus providing the greatest technical measure of protection to those ERCs); notify prospective purchasers of the existence of ERCs; and account for transfers and withdrawals. These roles will generally be performed by the state as part of its normal permitting activities. *Use* of banked credits must meet all the criteria of the particular SIP regulatory program under which they are to be used.[53]

The following sections address both minimum requirements for state banking rules which are approvable by EPA, and issues states should consider. States may adopt other approaches which produce equivalent results.

1. *Banking Rules Must Designate an Administering Agency*

Banking rules must identify the entity responsible for specific functions. While the state will ordinarily be responsible for verifying and processing ERC requests, all or part of this responsibility may be delegated to other organizations. Such organization(s) must possess the resources and legal authority to implement delegated activities.

2. *Only ERCs May Be Banked*

Banked emission reduction credits must be surplus, permanent, quantifiable, and enforceable by the state by the time they are banked.[54] However, if a source commits to produce a specific reduction at a specific time in the future, a state may allow a conditional deposit to be made. Procedures for such conditional deposits must ensure that they do not

[50] See section II.B.3 below.

[51] States may incorporate EPA-approvable banking rules in the SIP by submitting them for approval as SIP revisions.

Emission reductions banked through a formal or informal banking mechanism prior to a state's adoption of EPA-approvable banking rules may qualify for deposit in the EPA-approvable bank so long as [1] the source shows that its reductions are surplus, permanent, quantifiable and enforceable; and [2] the state shows that these reductions have not already been assumed or otherwise double-counted in the SIP.

[52] States and sources should be aware that because of differing regulatory requirements, the amount of credit actually derived from particular emission reductions may differ from one regulatory program to another. For example, in primary nonattainment areas needing but lacking approved demonstrations, the amount of credit from a given reduction which is available for bubble purposes may be less than that available from the same reduction for offset or netting purposes, since special progress requirements apply to bubbles in these areas.

[53] States may, however, expand opportunities for use of banked credits beyond those of current SIP programs (e.g., extend the "contemporaneous" period for netting), by submitting revised regulations addressing the banking and use of such credits, for approval as SIP revisions.

[54] In primary nonattainment areas which need but lack approved demonstrations, emission reductions made prior to application to bank or trade (whichever is earlier) will not be credited for use in bubbles (see section I.A.1.c.(7) above). Following publication of today's notice, the "date of application to bank" will be the date the source submits an application to the state to make a reduction state-enforceable through or concurrent with use of a formal bank or informal banking mechanism (see section I.A.1.b.(1) above).

In other areas, although emission reductions cannot qualify as ERCs or be deposited in EPA-approvable banks until they are made enforceable by the state, emission reductions banked through other formal or informal banking mechanisms will still be eligible for use in future trades, so long as those reductions are made federally enforceable at their time of use and all applicable requirements of the regulatory program under which they will be used are met. Since states may have to revise their regulations or permit procedures in order to implement this new definition, full implementation will not be expected until one year after publication of today's notice. However, all credits not made enforceable when banked during this interim period should ultimately be made enforceable within eighteen months from today's notice. Emission reductions currently deposited in banks should also be made enforceable by the state within eighteen months from the date of this policy.

compromise the state's ability to secure through further regulation any future reductions which may be needed.[55] In all cases the reduction must be made federally enforceable by the time the emissions trade which relies upon it is finally approved.

3. *Possible Limitations on Use of ERCs for New Source Permitting*

Use of banked ERCs for new source permitting must be consistent with applicable regulations approved by EPA under 40 CFR Parts 51 and 52. For example, under 40 CFR 51.18(j)(3)(ii)(c) shutdowns that occur prior to applications for a new source permit may ordinarily be used only as offsets for replacement facilities, and then only if the permit application was filed within one year after the shutdown occurred or if the reduction occurred after August 7, 1977.[56]

4. *Sources Should Apply to Bank Surplus Reductions As Soon As They Decide To Make Them*

For administrative simplicity and accurate quantification, sources should apply to bank reductions as soon as possible after they decide to make them. The administering agency should formally note the source's intent to make a surplus reduction, as expressed in the application. The state must then verify whether and to what extent the reduction actually occurred, and must make the reduction enforceable by the time it is accepted for deposit.

5. Procedures for Banking Surplus Emission Reductions Should Be Defined

To speed approval of trades and provide greater certainty for potential ERC creators and users, state banking rules should clearly specify which proposed emission reductions can qualify to be credited and banked, the information required of sources to substantiate their claim for credit, and any required application forms. At minimum, such rules must require firms to maintain records (e.g., production records and records of previous emission tests) adequate to determine the pre- and post-reduction actual and allowable values for emission rate, capacity utilization, and hours of operation for the source generating the ERC.

6. Banking Rules May Establish Ownership Rights

To prevent two entities from claiming or attempting to use the same ERCs at the same time, state banking rules may specify who can own ERCs. For example, while the source creating the ERC will generally be its owner, the state could, as part of its rule, reserve ownership of certain classes of ERCs to itself or local governments. States considering the latter course should carefully weigh whether such reservations are likely to increase or diminish future reductions and air quality management capabilities.

7. Banking Rules Must Establish an ERC Registry or Its Equivalent

An ERC registry or equivalent instrument allows states to track ownership, use, and transfer of all banked ERCs. Banking rules may provide that no transfer of title to a banked ERC will take effect until the transaction is reflected in the registry. This tracking system can minimize potential disputes and provide a central list of certified ERCs which may be available to potential purchasers. It can also provide useful information for quickly evaluating any proposed use of a banked ERC.

Information which may help evaluate future proposed uses of a banked ERC should be recorded at the time of its creation and entered as part of its banking record. This information should include the location of the source creating the ERCs; whether the reduction is due to a shutdown or curtailment; the date the reduction occurred or will occur (to allow future determination of the timing of the reduction with respect to the application for credit or its contemporaneity for use in netting or, if a shutdown, as an offset); the source's stack parameters; the temperature and velocity of its plume; particle size; the existence of any hazardous pollutants; daily and seasonal emission rates; and other data which might reasonably be deemed necessary under the requirements described in sections I.A. and I.B. above to evaluate future use.

To perform these tracking and clearinghouse functions the ERC registry must be accessible to the public. Subject to confidentiality considerations, states should make copies of the ERC registry available at convenient locations and times, and may want to publish or otherwise issue a periodic summary of banked ERCs.

8. Possible Adjustments to ERCs Based on Enforcement Considerations

Banking rules should state what, if any, changes may occur to ERCs after they have been banked. Once an ERC has been used by another source to meet a permit or other regulatory requirement, any violation of the conditions under which that ERC was created should result in enforcement against the source producing that ERC and not the source using it. If a state attempted to enforce against the source using purchased ERCs, a complex set of third-party lawsuits would likely ensue.[57]

9. Possible Adjustments to ERCs Based on Ambient Attainment Considerations

To assure the validity of its demonstration(s) of progress or attainment, a state with a banking rule must assume that all banked emissions will ultimately be used. In evaluating their ability to attain national standards, such states must add to their emissions inventory or measured ambient values all unused banked reductions at the site at which they were created. This is especially important for areas requesting reclassification from nonattainment to attainment. Failure to account for banked reductions as "in the air" for SIP planning purposes would ordinarily eliminate their use as ERCs following a new SIP design or inventory year, due to double-counting.

Additional emission reductions may be required from sources because of their area's failure to attain ambient standards, because of an increment violation, because of existing visibility impairment, or because new RACT requirements are being imposed under a SIP schedule. The existence of banked ERCs must not interfere with states' ability to obtain these additional reductions, and a state's rules on treatment of banked ERCs must provide it the necessary flexibility to meet future requirements. However, state banking rules may address, within this criterion, how banked ERCs will be treated if

[55] States have several available options to provide such assurance. They may, for example, bar conditional deposits from source categories which are subject to pending regulation. Alternatively, they may allow unrestricted conditional deposits but write future regulations in terms of RACT-equivalent reductions (e.g., an 80% reduction in current actual emissions) rather than in terms of specific control strategies or emission levels. The latter approach can avoid possible claims by some sources that no further control is required, while strengthening the state's ability to encourage further voluntary reductions as well as mandate needed ones. See section I.C.8.b below. States may adopt whichever alternative satisfies these concerns in their particular situation.

[56] See n. 14 above.

[57] Moreover, conflicting private-party attempts to assess ultimate responsibility for required reductions could make the purchased ERCs unenforceable and result in restoration of the creating source's original (higher) emission limits, due to claims that surplus reductions were produced in reliance on government rules implying their reasonable merchantibility and use. For these reasons emission limits altered as a result of the creation and use of ERCs must remain final and enforceable against the creator of those ERCs, so far as EPA is concerned.

additional reductions are required to attain and maintain NAAQS, protect PSD increments, or improve visibility. Available options include:

c. ERCs Generated Prior to the Design or Baseline Year Could be Eliminated. The use of ERCs generated prior to the design or baseline year is unlikely to be consistent with the state's demonstration, unless the state included such ERCs as "in the air" for planning purposes at that time.

b. ERCs Could be Discounted Against Adjustment. The state would determine the necessary quantity of reductions from individual sources and source categories and require these reductions from actively emitting sources. Banked credits previously created by sources would be fully preserved. Emitting sources could then satisfy new requirements for reductions either by reducing emissions directly or by using or purchasing equivalent ERCs.

In implementing this option, it would be particularly important for states to adjust downward the estimated total reductions due to these new regulatory requirements, in order to reflect reductions previously achieved as a result of banking actions. Alternatively, states could phrase new control requirements in terms of equivalent reduction results (e.g., "RACT-equivalent" reductions in nonattainment areas) as well as specified control techniques or emission levels. Under this approach necessary additional control requirements would be expressly stated in terms of additional reduction responsibilities, to be met without regard to prior trades.[58]

c. Use or Deposit of ERCs Could be Temporarily Suspended. States may suspend either ERC use or future ERC deposits until the state has committed in its SIP to secure reductions sufficient to reestablish progress or cure an increment violation. Use of either type of moratorium would be consistent with air quality objectives while allowing sources to retain and eventually use their entire quantity of banked ERCs. However, these options may be undesirable because of uncertainty regarding the moratorium's start, duration, or potential interference with user planning. This may be especially true where a moratorium on use (rather than deposit) is imposed after ERCs have been banked.

d. Across-the-Board Discounting. Under this option, the state could discount all ERCs in the bank by the same factor. For example, if a 10% additional reduction is required from a particular category of sources for the SIP's new demonstration, the state would discount all currently banked ERCs from those types of sources by 10%. Although the quantity of ERCs held by a firm will be reduced, the overall supply of ERCs will decrease, while demand will increase. Indeed, other sources may seek to purchase banked ERCs from creating sources, in order to meet the 10% reductions required of them. Thus, the price per unit of remaining ERCs is likely in many cases to increase.

This option is relatively straightforward for VOC or NO_x. For SO_x or particulate matter more detailed, source-specific modeling would generally be required to allocate the discount necessary to demonstrate attainment.

States may adopt any of these methods of accommodating possible additional reductions. They may also adopt any equivalent method which achieves the same objectives.[59]

II. Trades Covered by State Generic Rules

This section explains how states may develop EPA-approvable generic rules under which classes of emissions trades may be exempt from the general requirement for subsequent EPA approval as case-by-case SIP revisions.

A. General Principles for Evaluating Generic Rules

A generic rule is approvable if it assures that emissions trades otherwise requiring case-by-case SIP revisions under sections 110(i) and 110 (a)(3) of the Clean Air Act will be evaluated under state procedures that are sufficiently replicable in operation to guarantee that emission limits produced under the rule will not interfere with timely ambient attainment and maintenance or jeopardize PSD increments or visibility. Replicability generally means a high likelihood that two decision-makers applying the rule to a given trade would reach the same conclusion. For one example of a generic rule incorporating a very simple formula that meets tests of replicability, see 46 FR 20551 (April 8, 1981). In relation to generic bubble rules, this means that specific modeling procedures or surrogates are prescribed and that states have appropriately defined their choice of models, model inputs, and modeling techniques in applying these procedures to specific trades. Thus these trades should not create new ambient violations of standards or increments, delay the planned removal of existing violations, or degrade visibility in Class I areas. By approving such generic rules, EPA approves in advance an array of acceptable SIP emission limits, and no further SIP revision is required for trades which meet the terms of the state's approved rule.

EPA will comment on trades proposed under generic rules, conduct reviews of trades approved under those rules, and audit the implementation of these rules as part of its routine audits of other state air programs. See Section E below.

B. Scope of Generic Rules

States may use a range of mechanisms to exempt bubble trades from individual SIP revisions. While several general mechanisms are explained below, states may submit other generic rules that satisfy these basic principles. See section II.D below for specific requirements for generic rules in primary nonattainment areas which need but lack approved demonstrations.

1. VOC or NO_x Trades

VOC or NO_x trades approved by states under a generic rule that assures no net increase in applicable baseline emissions may occur without case-by-case SIP revisions.

The ambient impacts of VOC and NO_x emissions are areawide rather than source-specific. All such emissions within a broad area are considered comparable, regardless of plume height, topography or related factors. Thus, the ambient impact of trades involving emissions of VOC or NO_x from different sources within such an area will by definition be equivalent to that of the sum of applicable baseline emission limits for the sources involved in the trade.

For VOC and NO_x such pound-for-pound trades may therefore be treated under generic rules as equal in ambient effect where all sources involved in the

[58] See footnote 55 above.

[59] The preceding discussion generally assumes the bank is located in an attainment area or nonattainment area with an approved demonstration. In primary nonattainment areas which need but lack approved demonstrations, use for bubble purposes of banked shutdown or other credits which meet relevant requirements of today's notice will similarly be allowed. See section I.A.1.c.(3) above. Bubbles in these areas will already be subject to special progress requirements. However, in order to accommodate possible additional reduction requirements in other areas in a manner consistent with banks, states may voluntarily adopt such an approach for bubbles prior to the issuance by EPA of any formal notice of SIP deficiency mandating such requirements. States may also choose (as some have already done) to specify greater than 1:1 trading ratios for bubbles, offsets or netting. While this approach would not adjust the total amount of credit available in a bank, it can substantially enhance SIP planning efforts and provide a net air quality benefit by reducing the amount of emissions that can alternately be returned from the bank to the air.

trade are located in the same control strategy demonstration area, or where replicable procedures have been approved by EPA as part of the generic rule for determining when sources outside the demonstration area are sufficiently close that a pound-for-pound trade can be justified.[59]

In general, generic VOC trading rules must require that surface coating emissions be calculated on a solids-applied basis. The rule should also specify the maximum time period over which emissions may be averaged in an acceptable compliance demonstration. For VOC that averaging time should not exceed 24 hours unless the rule contains language approved by EPA that expressly allows a longer averaging period. See Appendix D below.

2. Particulate, SO_2, CO or Pb Trades

Classes of particulate, SO_2, CO and lead (Pb) trades may also be exempt from SIP revisions if they are approved under a state generic rule which assures that valid ERC uses cannot reasonably interfere with attainment and maintenance of air quality standards or jeopardize PSD increments or visibility.[61]

De Minimis Trades. Trades of particulates, SO_2 CO or lead (Pb) in which applicable net baseline emissions[62] do not increase and in which the sum of the emission increases, looking only at the increasing sources, totals less than 25 tons per year (TPY) for particulates, 40 TPY for sulfur dioxide, 100 TPY for carbon monoxide, or 0.6 TPY for lead (Pb), after applicable control requirements, may proceed without modeling and case-by-case SIP revisions.[63] Such trades will have at most a *de minimis* impact on local air quality because they will produce no net increase in emissions and the amount of emissions being shifted is not significant in ambient effect under associated EPA regulations. See 45 FR 52745 (August 7, 1980).[64]

Level I Trades. The ambient impact of particulate, SO_2, CO or Pb emissions depends on site-specific factors such as topography and plume height which are ordinarily evaluated by ambient dispersion modeling. However, if applicable baseline emissions do not increase, sources are located in the same immediate vicinity, and all other Level I requirements discussed in section I.B.1.b.(2) above are met, it can reasonably be assumed that "pound-for-pound" trades will produce ambient effects equivalent to those which currently approved air quality models would predict. As a result, trades meeting the criteria in section I.B.1.b.(2) above may be treated in the same manner as generic VOC and NO_x trades, and exempted from modeling and case-by-case SIP revisions.

EPA will normally approve generic rules that define "same immediate vicinity" as up to 250 meters between individual emission sources involved in a trade.

Level II Trades. Other particulate, SO_2, CO and Pb trades may also be exempted from case-by-case SIP revisions if they meet the Level II criteria in section I.B.1.b.(3) above and can routinely be modeled in a prescribed manner. The state's generic trading rule must specify the particular refined model that will be employed in a given situation, or criteria for selecting models in specified circumstances. To limit variability in modeling results the rule must also require at least a full year of meteorological data, identify the sites for that data, and specify procedures for selecting input data (e.g., wind speed, stability class, source emission rate) which are sufficiently defined to satisfy replicability concerns.[65] In some limited circumstances, a sufficiently conservative screening model could be specified as part of the generic rule. See section I.B.1.b(3) above.

Level III Trades. Because of the wide variability in data input and use inherent in full-scale dispersion modeling, Level III trades must be processed as individual SIP revisions. But cf. sections II.B.4 and III below.

3. Limits on Trades Exempt From SIP Revisions Under Generic Rules

Because some trades cannot readily be addressed in a replicable manner, the following may *not* in general be exempted under generic rules from the requirement for case-by-case SIP revisions:

a. Particulate, SO_2 CO or Pb trades requiring full-scale dispersion modeling under Level III (see section I.B.1.b.(4) above);

b. Particulate, SO_2, CO or Pb trades where complex terrain[66] is within the area of the source's significant impact or 50 km., whichever is less, unless the trade does not result in a modification of effective stack heights and the trade otherwise qualifies as *de minimis* or Level I. The area of significant impact can be determined as noted in footnote 21 above and in Appendix E;[67]

c. Open dust trades; and

d. Level II trades involving process fugitive particulate, SO_2, CO or Pb emissions not discharged through stacks.[68]

In addition to the above, in order to protect the integrity of various SIP processes, the following types of trades may *not*, in general, be exempted under generic rules from the requirement for case-by-case SIP revisions: (1) Trades involving ERCs from mobile source measures, (2) trades involving emission sources which are the subject of an enforcement action manifested by issuance of a notice of violation, an administrative order or section 120 action, or the filing of a judicial complaint, unless the rule specifies an

[59] The discussion in this paragraph does not apply to certain NO_x trades involving visibility impairment due to elevated plumes.

[60] The ambient equivalence considerations elaborated in this and following paragraphs also apply to NO_x trades involving visibility impairment due to elevated plumes. See n. 59 above.

Unlike other criteria pollutants, EPA does not designate nonattainment areas for lead. However, states must review lead trades, as all other trades, to assure that they do not interfere with attainment and maintenance of the NAAQS.

Generic state approvals of trades involving pollutants addressed in this subsection must be limited to sources which are located in the same or adjacent control strategy demonstration areas and the same general air basin.

[61] See n. 31 above.

[62] The *de minimis* level is 40 TPY for NO_x trades where visibility impairment due to elevated plumes is a consideration.

[63] This paragraph should not be construed to imply that new sources and modifications need not meet all applicable requirements, including those specified under 40 CFR 51.18 or parallel EPA-approved state rules.

[64] Because today's notice confirms the authority of states to use such EPA approved refined models as MPTER, CRSTER or ISC to conduct the "daily, temporal, spatial analysis" of post-trade ambient impacts required under Level II, approval of generic rules incorporating Level II approaches should be less uncertain and burdensome than under the previous 1982 approach. See, e.g., Appendix C below.

[65] Complex terrain is broadly defined by EPA as terrain greater in height than the physical stack height of a source. For bubble purposes, this definition is applicable only to sources with an increase over baseline emissions.

[66] Generally, aside from the exception stated above, trades involving complex terrain as defined above may not be processed under generic rules. However, states may wish to develop and submit for EPA approval additional area-specific criteria for determining when trades involving complex terrain do not present problems of potential plume impaction, and therefore may be approved under generic rules as *de minimis*, Level I or Level II trades using a flat terrain model. These additional criteria would include such factors as source height and emission rate, distance between stack and elevated features, rate of topographical rise, and other considerations which may be appropriate for a particular geographic area. States are encouraged to work with EPA to determine whether, where and how much additional criteria can be developed and applied within their state. Unless EPA has formally approved such additional criteria for a given geographic area as part of a generic rule, states must apply the general restrictions stated above when processing trades in that area under the rule.

[67] See Appendix C.

appropriate mechanism for notifying EPA of the source's bubble application prior to formal state proposal and for securing and recording written EPA concurrence that the bubble meets all pertinent requirements of the generic rule. (3) interstate trades. (4) VOC trades with averaging times longer than 24 hours, unless a state generic rule expressly providing for longer averaging times has been approved by EPA. (5) trades involving work practice and equipment standards, unless a state generic rule containing a provision expressly providing for state evaluation of such trades in a replicable manner has been approved by EPA, and (6) trades involving negotiated RACT baselines. *However*, a state generic trading rule could specify "presumptive RACT" limits which acceptably define generic trading baselines where RACT has not otherwise been defined in the SIP. While RACT baselines different from this presumptive limit could still be used for specific trades, they would need to be approved as case-by-case SIP revisions. Where there is no RACT in the SIP, but EPA has issued a CTG for sources of the type involved in the trade, the CTG should be used as the presumptive RACT-component of the generic trading baseline.

To the extent necessary, EPA will issue notices requiring that existing generic rules be revised to reflect these restrictions. See section II.E.4. below.

4. Other Generic Mechanisms for Exempting Particulate, SO_2, CO or Pb Trades From Case-by-Case SIP Revisions

EPA will approve other generic techniques which are demonstrated to equally protect ambient standards, PSD increments, Class I areas, and visibility. For example, a state could approve a modeled formula for two or more specific emission sources which would satisfy ambient concerns while allowing firms to define specific permit limits at each covered emission source. Like other generic provisions, such a formula would have to be approved as part of the SIP. EPA encourages states to work with EPA Regional Offices where they seek to develop other generic mechanisms which meet the tests of replicability and ambient equivalence described above.

C. Enforcing Emission Limits Under Generic Rules

Alternative emission limits approved under generic rules are considered by EPA to be federally enforceable so long as the generic rule specifies the compliance instrument (permit limits, etc.) under which the conditions of the trade will be implemented and all substantive and procedural requirements of the approved rule are met. Generic rules must specify that such alternative limits become applicable requirements of the SIP under § 110 for purposes of sections 113, 120, and 304 of the Clean Air Act and are enforceable in the same manner as other SIP requirements. To assure that EPA and citizens know what emission limits apply, generic rules must also specify that, and in what manner, EPA will be informed of emission limits applicable before and after the trade. (For additional issues related to enforceability, see section I.A.2 above. For requirements related to opportunity for public comment, see section II.F. below).

D. Generic Bubble Rules in Primary Nonattainment Areas Which Lack Approved Demonstrations of Attainment

Generic rules will continue to operate in primary nonattainment areas which require but lack approved demonstrations of attainment, under the following conditions:

1. Bubbles approved under existing generic bubble rules prior to the effective date of today's policy will not be affected by today's requirements.

2. Bubbles submitted to states under existing generic rules may continue to be approved by states in accord with those rules, until such rules are finally changed, pursuant to specific formal EPA request, to meet the criteria listed below. Such rules must, however, as requested by EPA, be modified to meet the criteria below.[68]

3. Applications for new generic bubble rules applicable to these areas, and applications for generic rules now pending before EPA, will be approved provided they meet the criteria below and all other applicable requirements of today's policy.

Criteria for Approvable Generic Bubble Rules. New and revised generic bubble rules applicable to primary nonattainment areas which require but lack approved demonstrations of attainment must, for bubbles in those areas:

a. Use lowest-of-actual-SIP-allowable-or-RACT-allowable emissions baselines for all sources involved in the trade;[70]

b. Using baseline emissions defined above, meet applicable *de minimis* Level I or Level II modeling tests for ambient equivalence, as appropriate;

c. Produce an overall emission reduction from each bubble equal (in percentage terms) to the larger of a 20% reduction in emissions remaining after applicable baselines, or to the overall emission reduction from controllable stationary sources (in percentage terms) needed to attain in the area (i.e., at least equal to the source-by-source emission reductions that would be required for a full demonstration of attainment, taking into account "uncontrollable" area or other stationary sources and expected emission reductions from mobil sources).[71] This determination must be

[68] In the interim, EPA expects states to ensure, as far as feasible, that bubbles approved under existing generic rules are consistent with this policy as well as with the terms of their EPA-approved rules. States should be aware that without this or similar precautions, continued approval of bubbles under existing generic rules containing identified deficiencies may create or accentuate plan deficiencies which may have to be corrected at a later date or compensated for by other means. See section E.4. below.

[70] For detailed discussion of these baselines, see section I.A.1.b. above and Appendix B.

[71] For example, assume air quality analysis indicates the area must decrease its base-year emissions by 45% to attain the relevant NAAQS. Further assume

	TPY
(a) For the base year:	
Uncontrollable stationary source emissions (e.g., residential combustion sources)	2,500
Controllable stationary source emissions	3,500
Mobile source emissions	4,000
Total	10,000
Target emissions for attainment 10,000 × (1.0–0.45)	5,500
(b) For the projected attainment year (before additional controls):	
Uncontrollable stationary source emissions (2,500 × 1.1)	2,750
Controllable stationary source emissions (3,500 × 1.2)	4,200
Mobile source emissions	2,500
Total	9,450

Therefore the reductions needed from controllable stationary sources are 9,450–5,500=3,950 TPY

And the percent emission reduction required from controllable stationary sources to attain is

$$\frac{(3950)}{(4200)} \times 100 = 94\%$$

Thus the net overall reduction required from each generic bubble would be 94% (i.e., the reductions produced by applicable baselines (e.g., application of a RACT emission rate) plus whatever percent reduction in emissions remaining after this RACT limit is sufficient to yield the 94% total).

States that wish to avoid SIP revisions for sources for which RACT has not yet been defined in an approved SIP provision may incorporate "presumptive RACT" limits (e.g., 80% reduction for VOC) in their generic rules. Sources would then have the option of accepting these RACT limits for generic bubble purposes, or negotiating different RACT limits through the SIP revisions process. However, where a source involved in a trade is one for which EPA has issued a CTG, but the state has not yet adopted the CTG-specified limit as RACT and no RACT has yet been specified by the state for that source, the presumptive or negotiated RACT limit for the trade must be at least as protective as the CTG for that source.

submitted with the rule, and must use the same type and quality of analysis as that required for an EPA-approvable SIP; and

d. Provide assurances, in conjunction with the State's submittal of the generic rule to EPA, that the state (i) is making reasonable efforts to develop a complete approvable SIP that will achieve the percent emission reduction from controllable sources described in the previous paragraph and (ii) intends to adhere to the schedule for development of such a SIP (including dates for completion of emissions inventory and subsequent increments of progress), as stated in the letter accompanying the submittal or in previous letters. In addition, to ensure that generic approvals continue to complement and do not interfere with attainment planning, EPA will require the state to include the specific assurances listed at section I.A.1.b.(3) above in or with its notices of proposed and final approval of each bubble issued under the generic rule in such a nonattainment area.[73]

E. EPA Oversight of Generic Rules

In order to ensure proper implementation of EPA-approved generic trading rules, EPA intends to (a) examine and comment on, together with any other public commenter, the information provided for individual trades proposed under a generic rule, (b) conduct reviews of individual trades approved under such a rule, and (c) periodically audit the implementation of the generic rule itself.

1. EPA Comment on Trades Proposed Under Generic Rules

When processing emissions trades under generic rules, states are required to provide EPA and the public with adequate notice and opportunity to comment. See sections II.F. and II.G. below. EPA will use state procedures for notice and comment to oversee the implementation of generic rules without delaying state processing of trading applications.

The information which a state must provide to EPA by the first day of the comment period (see section II.C. below) is generally sufficient for EPA to determine that a trading application is being processed properly. Where this information is not sufficient, EPA may request the application itself, and the state must provide it promptly.

Where EPA elects to provide any comments on the proposed approval, it will do so in writing, by the close of the comment period specified in the state's notice. EPA may also testify at any public hearing held pursuant to the approval of a trading application under a generic rule. Trading applicants and state officials are strongly advised to address EPA's comments, and where necessary to incorporate an appropriate response to those comments in the final approval document.[75]

2. Reviews of Individual Bubbles Approved Under Generic Rules

Reviews of individual generic bubble approvals, apart from the regularly scheduled reviews associated with activities under EPA's National Air Audit System (see section II.E.3. below), may be conducted at any time by EPA in order to promptly address identified or suspected problems and to avoid patterns of improper approval or other adverse effects which might accumulate before the next biannual audit is conducted.

3. EPA Audits of the General Implementation of Generic Rules

Under the National Air Audit System, EPA conducts a program audit of each state agency responsible for implementing the SIP and delegated federal programs.[74] These audits are currently carried out on a biannual basis. As part of the National Air Audit System, EPA will conduct an in-depth file audit of a representative sample of generic trading approvals issued by the relevant state.

4. Deficient Generic Trades

As discussed above, generic rules can expedite the approval process for certain classes of emissions trades because they allow such trades to be approved by states without undergoing a subsequent federal rulemaking process. However, to be considered valid by EPA, a trade approved under a generic rule must:

(1) Be one of a class of trades which is within the scope of the generic rule,

(2) Be approved *after* the generic rule has been approved by EPA, and

(3) Meet all the provisions of the generic rule as approved by EPA.

If a state-approved emissions trade does not meet all these requirements it cannot be considered part of the SIP and by definition cannot replace prior valid emission limits in the SIP. See 46 FR 20554–55 (April 6, 1981). Should EPA determine, as a result of its oversight activities, that a state-approved trade is inconsistent with the above requirements, it will notify the state and source in writing and specify any necessary remedial measures. In such circumstances, EPA may take appropriate remedial action to assure attainment and maintenance, including direct enforcement of the original SIP limits.[76]

5. Deficient Generic Rules

Existing generic rules approved under previous EPA policy and guidance may require revision in order to make them consistent with today's final policy. In addition, a generic rule approved by EPA under the final policy may subsequently be found to be deficient in some respect. Because EPA-approved generic rules have independent force of law, they can only be amended upon completion of a formal SIP revision process.

In order to ensure that generic rules are consistent with the Agency's current Emissions Trading Policy, EPA will publish notices in the **Federal Register** which identify any generic rules requiring formal modification.[76] These notices will identify specific deficiencies and means for correcting them, and will set forth a schedule for submission and review of revised rules. These notices will alert affected states to the danger that continued processing of trades

[73] These four requirements must be included as a contingent provision in all future generic rules, with the contingency triggered to apply to bubbles in primary nonattainment areas which become subject to a SIP call questioning their approved demonstration, after the generic rule was approved.

[75] Lack of EPA comment during the comment period will not bar future appropriate EPA enforcement or rulemaking actions if the bubble is found to be inconsistent with the generic rule.

[74] See, e.g., National Air Audit Guidelines for FY 84, Office of Air Quality Planning and Standards, EPA–450/5–83–007 (November 1983).

[76] In some cases EPA may have approved state SIP provisions which meet the functional criteria for generic rules, without indicating whether or not those provisions were approved for generic operation. Today's notice does not address the effect of generic validity of such provisions.

[76] EPA's publication of such notices will not trigger special progress requirements for case-by-case SIP revision bubbles in areas other than primary nonattainment areas which require but lack demonstration. Primary nonattainment areas which require but lack demonstrations should already be subject to special progress requirements of case-by-case SIP revision bubbles.

under these rules may create or accentuate plan deficiencies which may have to be corrected at a later date or compensated by other means. Where states fail to remedy deficiencies identified in the notice within the prescribed period, EPA may either rescind its previous approval of the rule, or issue a notice of SIP deficiency under section 110(a)(2)(H) of the Act.

F. Public Comment

For emissions trades processed under generic rules, existing state statutes or regulations will generally provide for adequate public notice and opportunity to comment, including opportunity for judicial review sufficient to make comment effective. Under such statutes or regulations, after the state has reviewed a bubble application submitted pursuant to an approved generic rule, a newspaper or similar notice is typically published providing a comment period (usually thirty (30) days) on the proposed decision to approve or disapprove the application. This notice generally informs the public that the proposed approval document (license, order, permit, consent agreement, etc.), the application itself (with the exception of any portion entitled to confidentiality under state or federal law[17]), and the technical analysis performed by the state in making its proposed determination, are available for review at specified times and locations. The notice also offers the opportunity for a public hearing.

Under today's policy, the state must also notify the relevant Federal Land Manager if an emissions trade will take place within 100 kilometers of a PSD Class I area. Notification must occur early enough in the review process to allow at least 30 days for the submittal of comments before the trade will be approved by the state.

Where adequate procedures for public notice and comment are not already provided in existing state statutes or regulations, such procedures must be provided as part of an EPA-approved generic rules. In all proposed and final generic bubble actions, states must clearly and publicly identify both the pre- and post-trade actual and allowable emissions of each source involved in the trade, so that the ambient effects of each bubble may be known.

To ensure adequate public awareness consistent with § 304 of the Clean Air Act, state generic rules or other existing state laws or regulations must also make publicly available any changes to emission limits which result from trades approved under a generic rule.

G. EPA Notification

In addition to the above requirements for public notice and comment, the generic rule or other state provisions must require that states, by the first day of the public comment period, provide the appropriate EPA Regional Office (see addresses in Appendix A) with a copy of the public notice, the proposed approval document, and the technical analyses performed in evaluating the trading application, together with any summary of those analyses which is available for public review.

State provisions must also require that immediately upon issuance of a final generic trading approval, the state will forward two copies of that document to the relevant EPA Regional Office, and will also submit to EPA any additional documentation which is included in comments or the post-comment record and supports that final state approval.

Any notices issued by EPA to correct notice and comment procedures which do not meet these requirements under current or future generic rules will not trigger special progress requirements or otherwise affect the operation of those rules. Because of the importance of adequate public and EPA notice, affected states should, however, correct deficient notice procedures to the extent practicable, in the interim period before formal rule revisions are submitted and approved.

H. Rulemaking on Generic Rules

EPA will process acceptable generic trading rules for approval as revisions to SIPs as expeditiously as possible. In the interim, states are encouraged to use parallel-processing SIP revision procedures (see 46 FR 44477: Sept. 4, 1981) wherever practical. Trades may not be generically approved by a state until EPA has published a notice of final approval of the generic trading rule in the Federal Register.

III. Trades Not Covered by State Generic Rules

In the absence of a generic rule, states and sources must use case-by-case SIP revisions to effect bubble or external offset trades. Individual trades may also fall outside the scope of an approved generic rule and still be implemented as case-by-case SIP revisions. The principles described in the Policy Statement and this Document will be used to evaluate these emission trades.

Because of the ability of the case-by-case SIP revision process to take account of greater individual variations, many trades which could not be accomplished under a generic rule may nevertheless be approved as case-by-case SIP revisions. Through this SIP revision process, states and sources may also demonstrate that a general principle discussed in Section I above does not apply to their particular circumstances, or that such a principle may be satisfied in other ways.

EPA will make reasonable efforts to take prompt action on SIP trading proposals after a state has ruled on an individual application and submitted it to the Agency. EPA encourages "parallel processing" of such proposals, with EPA and state officials conducting concurrent review so that both agencies can give public notice of proposed action at roughly the same time. EPA can then take final action after the state completes its proceedings, provided the state does not substantially alter the proposal after public notice. EPA will also publish noncontroversial SIP revisions as direct final actions, converting them to proposals only if requests to submit adverse comments are received within 30 days (see generally 46 FR 44477, September 4, 1981). In all bubble actions EPA will clearly identify (or require states to identify, as appropriate) both pre- and post-trade actual and allowable emissions for each source involved in the trade, so that the ambient effects of each bubble may be known.

Appendix A—Regional EPA Emissions Trading Coordinators

Region I. David Conroy (APS-2310), State Air Programs Branch, U.S. Environmental Protection Agency, Region I, John F. Kennedy Federal Building, Boston, Massachusetts 02203, (617) 565-3252; FTS 835-3252

Region II: Betty Martinovich, Air Branch, U.S. Environmental Protection Agency, Region II, 26 Federal Plaza, New York, New York 10007, (212) 264-2517; FTS 264-2517

Region III: Cynthia Stahl, Air Programs Branch, U.S. Environmental Protection Agency, Region III, 841 Chestnut Building, Philadelphia, Pennsylvania 19101, (215) 597-9337; FTS 597-9337

Region IV: Melvin Russell, Air Programs Branch, U.S. Environmental Protection Agency, Region IV, 345 Courtland Street, N.E., Atlanta, Georgia 30308, (404) 257-2864; FTS 257-2864

Region V: Joe Paisie, Air Compliance Branch, U.S. Environmental Protection Agency, Region V, 230 South Dearborn Street, Chicago, Illinois 60604, (312) 886-6777; FTS 886-6777

Region VI: Bill Riddle, Air Program Branch, U.S. Environmental Protections Agency, Region VI, First

[17] The specific pollutants emitted by the source, the amount of those pollutants, and their ambient air impact may not be deemed confidential.

International Building, 1201 Elm Street, Dallas, Texas 75270, (214) 767-9870; FTS 729-9870

Region VII: Charles Whitmore, Air Support Branch, U.S. Environmental Protection Agency, Region VII, 324 East 11th Street, Kansas City, Missouri 64106, (913) 236-2806; FTS 757-2806

Region VIII: Dale Wells, Air Programs Branch, U.S. Environmental Protection Agency, Region VIII, 1860 Lincoln Street, Denver, Colorado 80296, (303) 293-1773; FTS 564-1773

Region IX: Nancy Harney, Air Management Division, U.S. Environmental Protection Agency, Region IX, 215 Fremont Street, San Francisco, California 94105, (415) 974-7658; FTS 454-7658

Region X: David Bray, Air Programs Branch, U.S. Environmental Protection Agency, Region X, 1200 6th Avenue, Seattle, Washington 98101, (206) 442-4253; FTS 399-4253

Appendix B—Definitions of "Actual," "Allowable" and "Baseline" Emissions for Purposes of Emissions Trading

As used in this document with respect to bubbles, a source's "actual" emissions equal its average historical emissions, in tons per year, for the two-year period preceding the source's application to bank or trade emission reduction credit. Another time period may be deemed more representative of typical operations, but the applicant or state must show that actual emissions of such other period are consistent with air quality planning for the area. The definition of "actual emissions" for new source review purposes is somewhat different.[1] See 45 FR 52745 (August 7, 1980); 40 CFR 51.18(j)(1)(xii), 51.24(b)(21), 52.21(b)(21) and 52.24(f)(13).

A sources's "allowable" emissions in tons per year are calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable operating restrictions) and the most stringent of: (a) A standard applicable under 40 CFR Parts 60 or 61; (b) any applicable SIP emissions limitation, including those with a future compliance date; or (c) an emissions rate set in a federally enforceable permit condition. See 40 CFR 51.18 (j)(1)(xi), 51.24(b)(16), 51.21(b)(16) and 52.24(f)(11). The same definition of "allowable emissions" appears at each of these citations. See also 45 FR 52745 (August 7, 1980).

For bubbles, a source's "baseline" emissions are equal to the product of its (1) *emission rate* ("ER"), specified in terms of mass emission per unit of production or throughput (e.g., pounds SO_2 per million BTU or pounds of VOC per weight of solids applied); (2) *average hourly capacity utilization* ("CU") (e.g., millions of BTU per hour or weight of solids applied per hour); and (3) *number of hours of operation* ("H") during the relevant time period. I.e., baseline emissions = ER x CU x H. Net baseline emissions for a bubble are the sum of the baseline emissions of all sources involved in the trade.

In attainment areas and nonattainment areas with approved demonstrations of attainment, a source's baseline emissions for bubble purposes must generally be determined using the lower of "actual" or "allowable" values for each of the three baseline factors. Actual values for these factors are determined based on the source's average historical values for the factors for the two-year period preceding the source's application to bank or trade emission reduction credits. As discussed above, another time period may be deemed more representative of typical operations, but the emissions for that other period must be shown to be consistent with air quality planning for the area. A source's allowable values for the three baseline factors are determined based on its lowest federally enforceable limit for those factors (i.e., the lowest limit specified in an applicable SIP, PSD or other NSR permit issued under an EPA-approved program, compliance order, or consent decree), including those with a future compliance date.

The actual values for any of the three baseline factors, when higher than corresponding allowable values, may not be used by a source in calculating baseline emissions (i.e., reductions down to compliance levels cannot qualify for emission reduction credit). The allowable values for one or more of these factors, when higher than the corresponding actual values, may be used in calculating bubble baseline emissions for a source only in the following circumstances:

- Where, in a nonattainment or attainment area with an approved demonstration, the applicant shows that the demonstration assumes allowable value(s) for the factor(s) in question. Such a showing must be based on written evidence.
- Where, in an attainment area, the approved demonstration does not assume allowable value(s) for the baseline factor(s) in question, but the applicant performs satisfactory ambient tests to show that the use of such allowable value(s) will not jeopardize attainment and maintenance of NAAQS, PSD increments or visibility. For particulate matter or SO_2, this will require at least a Level II modeling analysis using actual emissions for the pre-trade case.[2] Where such an analysis is submitted to justify allowable values for a case-by-case SIP revision bubble, the Region may require additional technical support if deemed necessary to protect applicable standards or increments. See Section I.B.1.b above.
- Where, in a non-attainment area with an approved demonstration of attainment, the demonstration does not assume allowable value(s) for the baseline factor(s) in question, but the applicant demonstrates through a Level III modeling analysis that the use of such allowable value(s) will not jeopardize attainment and maintenance of NAAQS or PSD increments.
- Where, in an attainment area or a nonattainment area with an approved demonstration, a source has a new source preconstruction permit issued after the PSD baseline date or the base year of the attainment demonstration. In such cases, the applicant may use the value(s) of ER, CU and H upon which the new source permit was approved.

While the Emissions Trading Policy does permit sources to use allowable values for ER, CU and H in determining baseline emissions for bubbles under certain carefully prescribed conditions, the approach taken recognizes that SIP demonstrations are frequently based on a "hybrid" of allowable and actual values, and that bubble baselines in these areas must accurately reflect SIP assumptions for all three baseline factors, or be justified by appropriate modeling, to maintain SIP integrity.

In nonattainment areas needing but lacking approved demonstrations of attainment, sources involved in a bubble must use "lowest-of-actual-SIP-allowable-or-RACT-allowable" emissions baselines. The ER factor for such baselines is based on the actual emission rate, the SIP or other federally enforceable emission limit, or a RACT emission limit, whichever is lower, as of the time of the source's applicable to bank or trade, whichever is earlier. The CU and H factors for such baselines are based on the lower of actual or

[1] For instance, the calculation of actual emissions for netting purposes is as of the date of the event that brings about the reduction.

[2] Where the PSD baseline has been triggered, and such emissions data is available, the pre-bubble situation for sources which were in existence or commenced construction prior to the PSD baseline date should be modeled using emissions consistent with the PSD baseline concentration as defined in 40 CFR 51.24(b)(13) and 52.21(b)(13). However, emissions and associated parameters may be based on more recent values where past emissions data cannot readily be obtained. For related principles see section I.A.1.c.(1) above.

allowable values for those factors. Actual values for CU and H must be determined using the source's average historical values for the two year period preceding the source's application to bank or trade, unless another two year period is shown to be more representative of typical operations.

For sources which banked or sought to bank credit in these nonattainment areas prior to publication of today's notice, the "date of application to bank" is the date of written application to the state to bank credit through a formal bank or informal banking mechanism for use in future trades. For sources which seek to bank credit in these areas following publication of today's notice, the date of application to bank will be the date of written application to the state to *make a reduction state-enforceable* through or concurrent with use of a formal bank or informal banking mechanism.

Appendix C—Approvable Modeling Approaches

U.S. Environmental Protection Agency

Office of Air, Noise, and Radiation

February 17, 1983.

Memorandum

Subject: Emissions Trading Policy—Technical Clarifications

From: Sheldon Meyers, Director, Office of Air Quality Planning and Standards (ANR-443)

To: Director, Air and Waste Management Division, Regions II-IV, VI-VIII, X; Director, Air Management Division, Regions I, V, IX

The proposed emission trading policy was published on April 7, 1982, in the **Federal Register**. During the initial implementation of the proposal, numerous emissions trading issues have arisen including several ralating to the technical requirements of dispersion modeling and control strategy evaluations. To address these modeling issues, a special workshop was held to solicit recomendations from Regional meteorologists/modelers as well as the various Headquarters technical staff. The Standing Committee on Emissions Trading has also considered these issues and the recommendations of the workshop group.

This memo is intended to outline the results of these meetings and to provide interim guidance. It is effective immediately and will be incorporated into the final Agency policy when promulgated. The following revisions or clarifications on modeling for TSP, CO, and SO_2, are intended to supplement the criteria included in the April 7, 1982, emissions trading policy statement.

Level I Analysis

* To ensure air quality equivalence under Level I analysis (modeling is not required), trades cannot be approved where complex terrain (terrain greater than any stack with increasing emissions) is within the area of significant impact of the source or 50 kilometers, whichever is less.

* Stacks with increasing emissions must be at least good engineering practice (GEP) to prevent downwash.

* Fugitive process and stack sources can be traded under Level I (i.e., process for process, process for stack, and stack for stack) as long as the maximum distance between any emitting points is less than 250 meters. (This is true for trades under generic rules as well as for trades implemented by SIP revisions. The effective stack height requirement in the April policy remains.)

* Since trades involving open dust sources are very difficult to address in a replicable manner, they cannot currently be approved under generic Level I bubble regulations. (Reiteration of April 7, 1982 proposed policy.)

Level II Modeling Analysis

* In order to satisfy the basic requirement of the emissions trading policy that trades "must demonstrate ambient equivalence," the maximum change in air quality impact (delta) must be determined when performing a Level II analysis. Experience has shown that this requirement is not necessarily met where the April 7 policy says to analyze only the "impact at the receptor of maximum predicted impact after the trade." Therefore, to assure that no degradation of air quality greater than the significance levels would occur at any site, the method of finding the maximum deltas must be determined on both a spatially and temporally consistent basis. This menas that you look at each receptor point and determine the change in concentration from the before trade case to the after trade case sequentially for each time period within a full year of meteorological data (time period means the appropriate ambient standard averaging time; e.g., 3-hour, 24-hour, etc.). This appears the most reasonable method of determining ambient equivalence at this time.

Other techniques may be approved where they can be demonstrated to be equally protective of the standards and PSD increments. Also, a Level III analysis may be used to supplement those cases where Level II analysis shows a few receptors registering deltas greater than the significance values. This limited Level III anaysis would involve only the geographical area containing the high deltas and would include all contributing sources to that area.

* Use of refined models (e.g., MPTER, ISC) with at least one year of meteorological data is acceptable for a Level II analysis.

* To ensure replicability, only trades involving process fugitive emission sources vented through stacks can be approved in generic Level II rules unless the State rule specifically identifies actual facilities between which process fugitive trades would be permitted. In such cases, the State rule must specify the emission points and all associated and pertinent parameters needed to ensure replicability of modeling results.

* Since trades involving open dust sources are very difficult to address in a replicable manner, they cannot currently be approved under generic Level II bubble regulations. (Reiteration of April 7, 1982 proposed policy.)

* Trades involving complex terrain cannot be approved under Level II generic rules; however, approval of such trades through individual SIP reviews are possible under Level II. EPA's experience in processing bubbles for such sources has shown that they are exceedingly difficult to address in a replicable manner. They require a considerable number of judgments and negotiations among Agency personnel concerning the models, data bases, and proper source characterization.

* All national ambient air quality standards (NAAQS) averaging periods, not just the 24-hour, must be considered when performing the air quality equivalence analysis. This is necessary to assure trades approved under Level II will not have any adverse health and welfare impacts. Therefore, all Level II analyses must test the delta for each receptor site against the following significance levels: TSP—10 $\mu g/m^3$ (24-hour), 5 $\mu g/m^3$ (annual); SO_2—13 $\mu g/m^3$ (24-hour), 46 $\mu g/m^3$ (3-hour), 3 $\mu g/m^3$ (annual); CO—575 $\mu g/m^3$ (8-hour) 2300 $\mu g/m^3$ (1-hour).

Implementation of Changes

Implementation of these changes by the Regional Offices in their negotiations with States and individual sources should begin immediately. If there are any on-going bubble activities where the Regions or States and sources have reached firm agreements which do not comport with these changes, please alert Tom Helms (FTS 629-5526) of my staff. Consideration will be given to situations where the source or State has

already invested significant resources in a good-faith analysis based on prior methods of demonstrating ambient equivalence. If you have specific questions regarding implementation of these policy changes, please call Tom Helms.

cc: Chief, Air Branch, Regions I–X, Meteorologist, Regions I–X, Mike Levin, Joe Tikvart, Darryl Tyler

Appendix D—Approvable Averaging Times for VOC Trades

U.S. Environmental Protection Agency

Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina 27711

January 20, 1984.

Memorandum

Subject: Averaging Times for Compliance With VOC Emission Limits—SIP Revision Policy

From: John R. O'Connor, Acting Director, Office of Air Quality Planning and Standards (MD–10)

To: Director, Air and Waste Management Division, Regions II–IV, VI–VIII, X, Director, Air Management Division, Regions I, V, IX.

The purpose of this memorandum is to clarify the Agency's policy regarding emission time averaging for existing sources of volatile organic compounds (VOC's). Numerous State Implementation Plan (SIP) revisions, both broad regulations and source-specific changes, have been submitted which provide for compliance determinations by "time averaging" emissions of VOC for periods exceeding 24 hours. These requests and the following policy on this subject were discussed extensively at a recent meeting attended by those Regional Offices which have the most pending actions (Regions I, III, IV, V); the Office of Air Quality Planning and Standards; and the Office of General Counsel. This policy represents the consensus of the meeting attendees.

The objective of EPA's national VOC emissions control program is the timely attainment and maintenance of the national ambient air quality standard (NAAQS) for ozone. SIP revisions and other regulatory actions relating to VOC control must maintain the integrity of this basic objective. There should be assurances that VOC emission control is reasonably consistent with protecting this short-term ozone standard. Further, since SIP's and associated VOC control programs contemplate the actual application of reasonably available control technology (RACT), regulatory actions that incorporate longer term averages to circumvent the installation of overall RACT level controls cannot be allowed.

Current Agency guidance specifies the use of a daily weighted average for VOC regulations as the preferred alternative where continuous compliance is not feasible. An example might be where a facility operates in a batch manner with multiple lines and various products. Reference is made to the December 8, 1980, **Federal Register** (copy attached) where can coating operators are allowed to "bubble" several production lines and average emissions over a 24-hour time period.

The preferred daily weighted average alternative may not be feasible in all cases. Where the source operations are such that daily VOC emissions cannot be determined or where the application of RACT for each emission point (line, machine, etc.) is not economically or technically feasible on a daily basis, longer averaging times can be permitted under certain conditions. In determining feasibility, consideration might be given, for example, to the extent to which modifications can be made to testing, inventory, or recordkeeping practices in order to quantify daily emissions. Also, variability or lack of predictability in a source's daily operation might be considered as well as availability of control technology or the physical impediment or restriction to control equipment installation. In order to allow longer than daily averaging in SIP regulations, the following conditions or principles must be honored:

1. Real reductions in actual emissions must be achieved, consistent with the RACT control levels specified in SIP's or the control technique guidelines (CTG's). These limits are typically expressed in terms of VOC per unit of production (a qualitative term such as lbs VOC/gal coating). Where it is not feasible to specify emission limits in such terms, emission limits per unit of time can be approved provided that:

a. The emission limits reflect typical (rather than potential or allowable) production rate and operating hours. These emission limits must truly reflect emissions reductions consistent with RACT and are not simply an artificial constraint on potential emissions. This must be supported in the SIP revision by historical production and operation data.

b. Nonproduction or equipment downtime credits are not allowed in the emission limit calculation unless a Federally enforceable document specifically restricts operation during these times. Such credit must be based on real, historical emissions.

2. Averaging periods must be as short as practicable and in no case longer than 30 days.

3. A demonstration must be made that the use of long-term averaging (greater than 24-hour averaging) will not jeopardize either ambient standards attainment or the reasonable further progress (RFP) plan for the area. This must be accomplished by showing that the maximum *daily* increase in emissions associated with long-term averaging is consistent with the approved ozone SIP for the area.

4. Sources in areas lacking approved SIP's, or in areas with approved SIP's but showing measured violations, cannot be considered for longer term averages until the SIP has been revised demonstrating ambient standards attainment and maintenance of RFP (reflecting the maximum daily emissions from the source with long-term averaging).

Meaningful short-term (i.e., daily) emission caps are desirable especially for sources subject to large fluctuations in emissions. The use of a daily cap (equal to or less than current average emissions on a daily basis) that limits short-term emissions to RACT equivalent levels would meet the above objective of ensuring VOC control that is consistent with attaining the NAAQS for ozone.

States have the primary responsibility to show adherence to the above principles and, to do so, must include the following information (in detail) in all SIP revision requests that seek VOC averaging times greater than 24 hours:

1. The VOC limits specified in an enforceable form with appropriate compliance dates.

2. A description of the affected processes and associated historical production and operating rates.

3. A description of the control techniques to be applied to the affected processes such as low solvent and waterborne coating technology and/or add-on controls.

4. The nature of the emission control program whether a bubble, a regulation change, a compliance schedule, or some other form of alternative control program.

5. The method of recordkeeping and reporting to be employed to demonstrate compliance with the new emission limit requirement and to support the showing that the emission limit is consistent with RFP and the demonstration of attainment.

Each EPA Regional Office shall have

the primary responsibility for determining the approvability of application requests. However, in order to assure Regional consistency, coordination with the Office of Air Quality Planning and Standards staff is encouraged during the initial development of any single "time average" SIP revision or regulation. Also, all SIP revisions involving long-term averaging must be proposed in the Federal Register with an explanation of how the principles listed above have been satisfied.

Should there be any questions on this policy, please call Tom Helms (FTS 629-5526) or Brock Nicholson (FTS 629-5516).

Attachment

cc:

Barbara Bankoff
Ron Campbell
Jack Farmer
Mike Levin
Ed Reich
B.J. Steigerwald
Darryl Tyler
Peter Wyckoff
Chief, Air Branch, Regions I–X
Regional Administraior, Regions I–X.

Appendix E—Radii of Significant Impact for Approving "Complex Terrain" PM, SO_2 and CO Trades Under Level I Modeling Approaches

Appendix E indicates on its vertical axis the post-trade emission rate for the stack with increasing emissions (E), and on its horizontal axis the radius of significant impact (R) within which level I trades may be approved despite the presence of complex terrain outside that radius.

The curves in Appendix E have been generated using a normally conservative screening model, VALLEY, to estimate R for each E, using the 24-hour and 3-hour air quality impact significance level for SO_2 and the 24-hour significance level for particulate matter (PM) which have been established for level II modeling. It was assumed that the short-term standards would be controlling.

The F-stability class was assumed, and wind speed was presumed to be one meter per second for estimating the radius of significant impact for the three-hour period, and 2.5 meters per second for the 24-hour cases. In developing the three-hour curve, it was assumed that F-stability and a wind speed of one meter per second would persist for as much as fourteen consecutive hours. In developing the 24-hour curves, it was assumed that F-stability with a wind speed of 2.5 meters per second would occur for six hours of any 24-hour period.[1]

This Appendix provides different estimates for SO_2 and PM because the significance levels for these pollutants are different. For CO, the R value for E value may be determined by multiplying the E for SO_2 by twenty (20). This is a conservative approach towards determining radii of significant impact for CO. Where the effective height of the stack with increasing emissions is not changed (e.g., where the only change is in the sulfur content of fuel burned), the change in the hourly emission rate (E) may be used in lieu of E."

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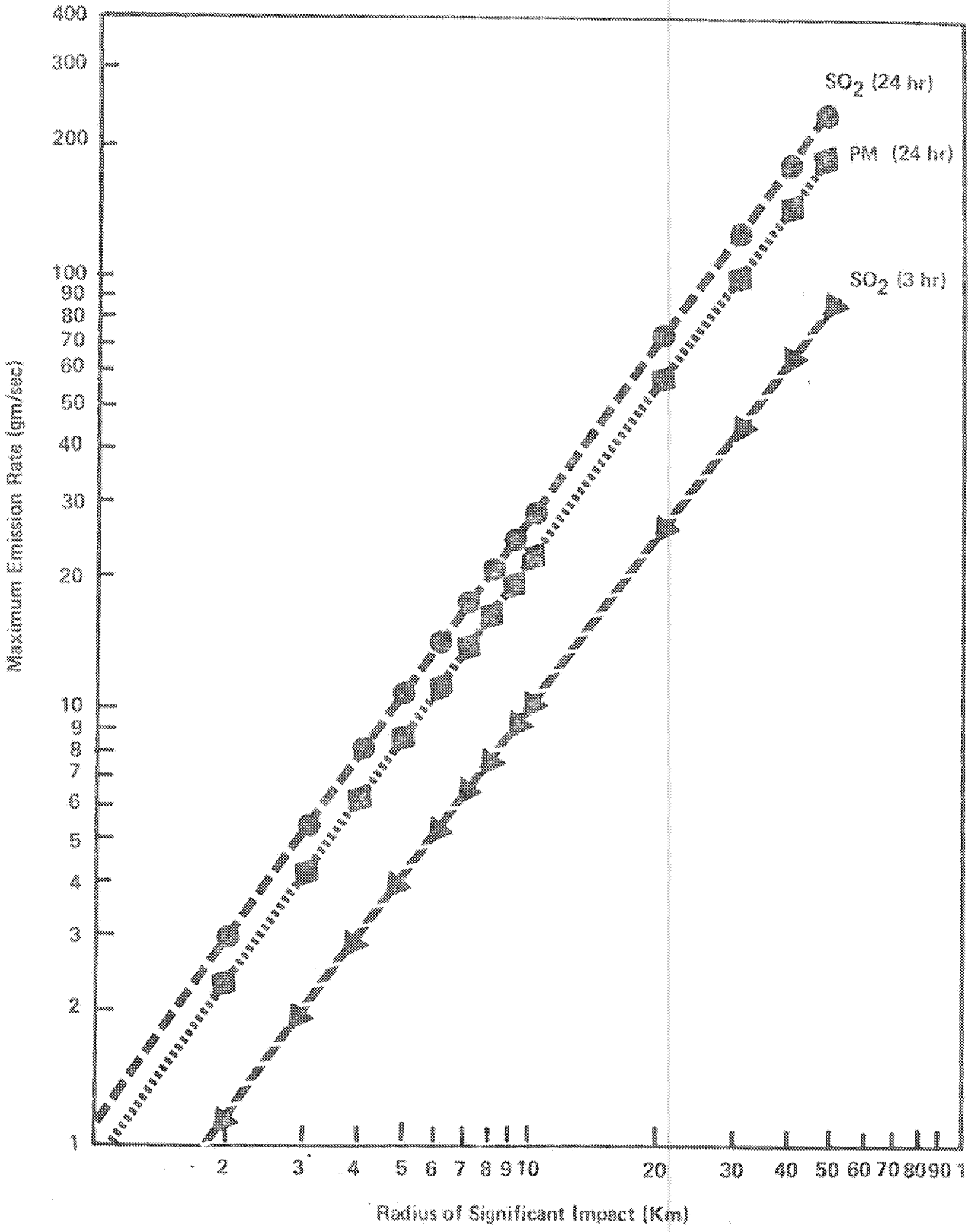
[1] The curves in Appendix E were derived using the assumptions described above so that they could be used to determine radii of significant impact for sources in any part of the country. However, it is possible that for some areas, local meteorological conditions will be such that alternative, less conservative meteorological assumptions can be employed in determining these radii. Where states can show that the use of such alternative assumptions is appropriate for a given area, they develop alternative curves or formulas for determining radii of significant impact and submit them for review and approval by EPA, either in conjunction with an individual bubble submittal or as part of a generic rule. States are advised to work closely with the appropriate Regional Office in any effort to develop such alternative approaches.

FIGURE I:

Radii of Significant Impact for PM & SO_2 for Different Averaging Times



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Appendix F—CFR Part 51 Conversion Table

On November 7, 1986 (51 FR 40658) EPA restructured CFR Part 51 and renumbered many of that part's sections. Because most readers will be more familiar with prior designations, today's notice contains citations based on Part 51 as it existed before this restructuring. A detailed finding list of the old versus new citations can be found in Table 2 of the Preamble of the November 7 notice. Today's readers may also use the following table to convert today's Part 51 citations to the corresponding new ones.

CFR Part 51 Conversion Table

Old 40 CFR 51 Citation	*New 40 CFR 51 Citation*
51.18	Subpart I
51.18(j)	51.165(a)
51.18(j)(1)(vi)	51.165(a)(1)(vi)
51.18(j)(1)(x)	51.165(a)(1)(x)
51.18(j)(1)(xi)	51.165(a)(1)(xi)
51.18(j)(1)(xii)	51.165(a)(1)(xii)
51.18(j)(3)(i)(c)	51.165(a)(5)(i)(C)
51.18(k)	51.165(b)
51.22	51.28)
51.24	51.166
51.24(b)(3)(b)(ii)	51.166(b)(3)(b)(ii)
51.24(b)(13)	51.166(b)(13)
51.24(b)(13)(ii)	51.166(b)(13)(ii)
51.24(b)(16)	51.166(b)(16)
51.24(b)(21)	51.166(b)(21)
51.24(b)(23)	51.166(b)(23)

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