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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 21, 1983 (48 FR 38250).

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 requires 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) 541-5518.

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 Elman, Regulatory Reform Staff (PM-223), U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460, (202) 382-2737.

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 39500, 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 of 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;

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[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 43814). 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 connection 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.*

On June 25, 1985 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).* 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,* 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)–(b) 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.*

Pending or future litigation or rulemaking, particularly final resolution of the settlement agreement arising from the industry challenge to EPA's 1980 promulgation of revised NSR rules (*Chemical Manufacturers Association v. EPA*, No. 78–1112, D.C. Cir., February 1982), may alter aspects of this policy, especially regarding certain transactions under EPA new source review regulations. See 48 FR 29743 (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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* See, however, discussion of "pending bubbles" in Section I.C. of today's Policy Statement and Section I.A.1 (c)(i) of today's Technical Issues Document.

* *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 104 S. Ct. 2778, 14 ELR 20245, overruling *Natural Resources Defense Council, Inc. v. Gorsuch*, 685 F.2d 718, 12 ELR 20567 (D.C. Cir. 1982).

* 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).

* 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 to generate netting is also allowed under the dual definition, because more individual pieces of emitting equipment in 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, as 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.*

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.*

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]

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

* Netting and offset transactions are governed by EPA's regulations at 40 CFR 51.18, 51.24, 51.165, 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 D 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.[14] 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 commentors 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.[15]

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.[16] 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"

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[14] 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.

[15] 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).

[16] 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.3, 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.[16]

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.
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> 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 each bubble 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.[17] Of 13 state agencies commenting with respect to areas that *do not have* approved demonstrations, ten urged that shutdown credits be retained for these

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[16] See, e.g., Clean Air Act Amendments of 1977, section 121, codified at 42 U.S.C. 7502 note; 3 *Legislative History of the Clean Air Act Amendments of 1977*, pp. 527, 718, 44 FR 2274–75 (January 18, 1979). This Congressional mandate was largely superseded by eventual state adoption of supervening SIP limits. Under current EPA regulations and SIP, allowable emission rates may ordinarily be used to compute the baseline for offsets only where an approved SIP demonstration and inventoried allowable emissions to its demonstration of reasonable further progress. See Clean Air Act 173(1)(A), 42 U.S.C. 7503(1)(A).

[17] 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.[19] 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.[20] 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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[19] 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.

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

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

[22] 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 articulated at length by earlier comments, it is addressed as part of the Agency's final response below.

[23] Cf., e.g., Union Carbide Corp. (Texas City), 47 FR 21533 (May 19, 1982); B.F. Goodrich (Avon Lake), 49 FR 4790 (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 39604 and n. 13, 39589-90.

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 20% reduction (81% RACT + 20% of remaining VOC emissions) appears sufficient to produce ambient attainment, if these 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., "Air Attainment Status of 33 Areas Under Different Degrees of Stationary Source

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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 39582 (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. 1986)); Letter, Richard A. Liroff, The Conservation Foundation, to Hon. Lee M. Thomas, March 12, 1986 ("The trial calculation . . . indicates the staff's attentiveness 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 conclusions 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 similarly affect, and can determinatively "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., 47 FR 15077, 15080; 48 FR 39580 and n. 2, 39582 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 lower than RACT baseline 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 nontraditional sources, as well as provide detailed emission profiles of such sources (see, e.g., application of Shenango Iron and Steel Co., approved at [illegible] (December 28, 1983)), have provided current emissions data not otherwise available to EPA through the Agency's National Emissions Data System (50 FR 25065, June 17, 1985), and have disclosed the existence of sources (or in 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 emissions cap under the state's VOC bubble rule. This requirement has produced baseline data for previously unquantified emission years for some sources.

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