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 80624, 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).[24] 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).[25] 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.[26]

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).[27] 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.[28]

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.[29] 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

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[24] 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.

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

[26] 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.c. above.

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

[28] 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 B.

[29] In primary nonattainment areas pending 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.[55]

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.[56]

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.[57] 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 [58] 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)).[59]

(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;[60]

(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 [61] is within the area of significant impact of the trade [62] or 50 kilometers, whichever is less; [63]

(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,[64] 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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[55] The discussion in this paragraph does not apply to NO_2 trades involving visibility impacts of elevated plumes.

[56] The ambient equivalence considerations elaborated in this and following paragraphs also apply to NO_2 trades involving visibility impacts of elevated plumes. See n. 28 above.

[57] Modeling is generally not required for new source netting, where purpose is to avoid expending resources where adverse emission or ambient impacts from changes at a source are extremely unlikely. See, e.g., 51 FR 28077–78 (August 7, 1986).

[58] 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 on 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 prove, 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.

[59] 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.

[60] See n. 21 above.

[61] 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.

[62] 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.

[63] 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. Those 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.

[64] See n. 33 above.

standard,[39] and if such an analysis does not predict any increase in ambient concentrations in a mandatory Federal Class I area.[40] 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.[41]

(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,[42] 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.[43]

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.[44]

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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** 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;

40 $\mu g/m^3$ for any 3-hour period for SO_2;

2 $\mu g/m^3$ 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.

** 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.

** 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. 39 above, or (b) the stack parameters of 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.

** See discussion in I.B.1.c. below.

** 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.

** 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 24310; 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 51.16, 51.24, 51.32, 51.307, 52.28, or 52.27. Thus, while these source changes must still meet applicable NSPS, NESHAPs, preconstruction applicability review requirements under 40 CFR 51.16 (a)–(b) and (i), 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 totally 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 lowered 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. 8.

[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)(30)(i).

[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 30796, October 14, 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. Costanzo*, 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, other in setting action, should be terminated.

Such terminations 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 80 TPY and 120 TPY respectively. Assume the state imposes a new category-wide regulation which would normally limit these sources to 80 TPY each. In this case, the first source should be required to meet the new 80 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 20 TPY emission reduction credit). Termination of the emission reduction credit would occur either by requiring the first source to produce additional emission reductions of 20 TPY (i.e., more than the current level of enforcement), or the second source to meet the 80 TPY limit. Either of these results would undermine the purpose of today's notice by eliminating the predictability required for generation or use of ERCs. 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.8. 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.[89] 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.[90] 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.[91] 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.[92]

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.[93] 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

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

[90] 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.

[91] 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.

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

[93] 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) 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, as 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)(i)(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

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[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 on 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.4.b below. States may adopt whichever alternative satisfies these concerns in their particular situation.

[56] See n. 19 above.

[57] Moreover, conflicting private-party attempts to assess ultimate responsibility for surplus reductions could make the purchased ERCs unenforceable and result in restoration of the creating source's original (higher) emissions limits, due to claims that surplus reductions were produced in reliance on government rules implying their reasonable marketability 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:

a. 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 Guaranteed 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.3.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 ultimately 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.**

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.**

De Minimis Trades. Trades of particulates, SO_2, CO or lead (Pb) in which applicable net baseline emissions** 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.** 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).**

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.** 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** 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.**

c. Open dust trades, and

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

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

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

** The ambient equivalency considerations enumerated in this and following paragraphs also apply to NO_x trades involving visibility impairment due to elevated plumes. See n. 80 above.

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

** Generic case 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.

** See n. 31 above.

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

** 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.

** Because some states question the authority of states to use such EPA-approved refined models as AMS/EPA CRSTER or DMC 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 DMC approach. See, e.g., Appendix C below.

** Complex terrain is locally defined by EPA as terrain greater in height than the physical stack height of a source. For ease of use, this definition is applicable only to sources with an increase close to their associates.

** Generally, trades from the exemption stated above, under including 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 sources located in complex terrain do not present problems of potential class increment and therefore may be approved under generic rules or *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 terrain, size 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, such 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.

** 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.[69]

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

[69] In the interim, EPA expects states to ensure, so 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	5,000
Mobile source emissions	1,500
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 (5,000 × 1.2)	6,000
Mobile source emissions	2,000
Total	8,750

Therefore the reductions needed from controllable stationary sources are 8,750–5,500=3,250 TPY.

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

$$\frac{(3250)}{(6000)} \times 100 = 54\%$$

Thus the net overall reduction required from each generic bubble would be 54% (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 54% 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., 30% 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.