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OZONE TRANSPORT COMMISSION

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March 4, 2002

Jeffrey R. Holmstead, Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
6101A
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Dear Mr. Holmstead:

On behalf of the Ozone Transport Commission (OTC), thank you for attending our Winter meeting in Baltimore, Maryland on February 26th and speaking with us on the U.S. Environmental Protection Agency's (EPA's) air priorities. The exchange was frank and, I believe, mutually beneficial. This letter further details our expressed concerns regarding EPA's process and progress to date in developing its implementation approach for the eight-hour ozone standard.

Our need to reduce ozone and ozone transport into and within the Ozone Transport Region is driven by our mandate to protect public health. As you know, exposure to ground-level ozone can cause lung inflammation and irreversible lung damage, and aggravates asthma and other respiratory conditions and illness. Ozone reduces the immune system's ability to fight off bacterial infections in the respiratory system. Scientists have found that approximately one in three people in the U.S. is at a higher risk of experiencing ozone-related health effects. These adverse effects are prevalent in children, healthy adults that work or are active outdoors, those with pre-existing respiratory ailments, and in some cases, the elderly. Our position is that it is imperative that plans and programs are implemented that result in real emission reductions -- and ensure attainment of the eight-hour ozone standard -- as soon as possible.

In October 2000, a process was established through the state and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) to help EPA develop an implementation approach for the eight-hour ozone standard. Over the past two years, we have supported this process and committed significant resources in order to participate in it. To date, EPA has developed three preliminary classification options (enclosed), all of which are unacceptable to us.

We are disappointed that EPA's efforts to date in drafting classification options do not reflect the recommendations developed by the state participants in the STAPPA/ALAPCO process. EPA and the states had agreed that work products from that process would directly inform EPA's implementation approach. The participating States and EPA collaborated to develop an excellent series of technical and policy papers as a menu of options for EPA to use. EPA collected and distributed these papers to all participants over a year ago; they are enclosed, and we would like them to be entered into Docket #2001-A-31 (see 67 FR 7112-7113).

The three classification options do not address ozone transport, which we believe is a fundamental contributor to the extent of eight-hour non-attainment in the Ozone Transport Region. EPA's apparent disregard of transport in this context is unsupported, given the understandings of transport we have all learned from past efforts, including those of OTC and the Ozone Transport Assessment Group (OTAG). As you know, the "NOx SIP Call" was implemented in light of the overwhelming evidence --generated by the OTAG process -- of the impacts of ozone transport on the ability of "downwind" areas to attain the ozone standard.

We strongly oppose Options 1 and 3, which automatically create "sub-marginal areas" in which control requirements would be significantly limited -- short of a downwind State submitting a §126 petition. Option 2 (which classifies non-attainment areas by comparing the area's eight-hour ozone design value to recalibrated one-hour ozone classification cut-points from the Clean Air Act) appears to comport with the Supreme Court's decision, but presents significant concerns since it does not account for transport of ozone and ozone precursors.

It is our position that EPA's final eight-hour ozone implementation approach must deal with transport up front. EPA's current classification options do not build on the lessons learned from the problems experienced over many years in implementing the one-hour ozone standard. A more stringent and robust eight-hour ozone standard implies, by design, that additional, new areas must control emissions to some extent in order for all areas to attain the standard. There are many requirements and mechanisms in the Clean Air Act that require EPA to consider the effects of transport in non-attainment area designations, classifications and State Implementation Plan approval processes. There is also considerable scientific evidence that regional NOx reductions are more critical than VOC reductions in addressing ozone transport. Therefore, we believe that EPA could develop guidance that addresses new non-attainment area minimum requirements within the context of Subpart 2 of the Clean Air Act, without necessarily requiring a vast menu of VOC controls. We believe EPA can integrate these concepts into an eight-hour implementation approach that is consistent with the Supreme Court's decision.

We would like to continue working with you to develop thoughtful and viable implementation approaches that address transport through upwind and non-attainment area accountability. We believe that the states have a lot to offer, and that EPA has not taken full advantage of our considerable expertise. In response to your request, within the next month, the Northeast and Mid-Atlantic states will develop a proposed framework approach and some options for eight-hour implementation.

We would be happy to discuss our proposal with you and your staff. As you know, we need the eight-hour ozone standard implementation effort to be successful, as the health of our citizenry relies on its success.

Sincerely,

Arthur J. Rocque, Jr.,
Chair

Enclosures

cc: OTC Members
S. William Becker, STAPPA/ALAPCO
Rob Brenner, EPA
Bruce Carhart, OTC
Arthur Marin, NESCAUM
John Seitz, EPA
Lydia Wegman, EPA
Susan Wierman, MARAMA

Enclosure 2: STAPPA/ALAPCO Subgroup Workproducts,
January 2001

STATE AND LOCAL AGENCY GUIDING PRINCIPLES FOR NEW SOURCE REVIEW

The best time to control a source is at the time of its installation or modification.

We support the application of BACT and use of the "Top Down BACT Process."

New or modified sources must have legally enforceable limits on their future emissions. These emissions limits must be compatible with the SIP and should be analyzed at their future allowable rate.

Emission increases must be analyzed with regard to their potential ambient impact. The increases may not interfere with the attainment and maintenance of the NAAQS, or cause a violation of a PSD increment. The new source or modification should be analyzed with regard to toxics. The effect of any increase on air quality related values also must be analyzed.

The impact of future MACT and RACT controls on the new source review process is currently unknown but should be significant, and could lessen our anxiety about sources netting out of controls.

Sources should not be allowed to "net out" of control requirements (BACT or LAER).

New Source Performance Standards (NSPS) are not a good surrogate for BACT, since many are outdated and were never intended to represent BACT in the first place.

We support the RACT/BACT/LAER Clearinghouse and consider it reasonable to expect data entries by State and Local Agencies. We also support the concept of a major source application data sheet submission to the Clearinghouse.

Plantwide Applicability Limits (PALS) are supportable under Title V with all units identified and allowable emissions stated in the permit. However, even under the PAL concept, new units should apply BACT.

We favor a simplification process which gives industry timeliness and certainty, but retains a strong technology requirement for all new or modified sources.

April 1994

NSR PROGRAM S	PROS	CONS	COMMENTS
TRADITIONAL NSR Option 1 1. LAER, Offsets for nonattainment area. 2. Offset ratios and applicability cutoffs remain per court decision on whether subpart II applies.	- Since existing program is in place nothing new is required. - Well defined in CAA. - Generally understood by industry. (except applicability) - Provides a reasonable level of certainty. - Straightforward accounting, since mass emissions (tons) applicability basis. - BACT/LAER requirements - better controls. - Offset ratio provisions - overall reduction in emissions. (If triggered) - States and locals - flexibility and responsibility for Minor NSR. - Air quality modeling - standardized. - Appropriate public participation process. - Tightest requirements in worst air quality areas. (Some view this as a con.)	- Complicated current process - many court cases and policy memos. - Recent enforcement actions- uncertainty on applicability. (Some do not view this as a con.) - For PSD, < 249 tpy sources not subject - may result in location of sources outside nonattainment areas. - Netting provision - loophole allows new units without BACT/LAER. - Outdated NSPS categories and standards. - Degree of control is not dependent on air quality. (No good air quality impact model for ozone.) - No allowance for less stringent requirements in NA areas due to transport.	

TRADITIONAL NSR Option 1 (continued)		- Some States have no minor NSR programs. - Offset availability maybe a hurdle. - Inconsistent/infrequent air quality analyses - difficult to study the impacts of NSR. - Early reductions are not always rewarded. - Current program allows up to significant increases. - Areas with monitors are at a disadvantage compared to areas without monitors. - Compliance assurance related requirements hurt flexibility of operations for facilities. - Unclear requirements for NOx - transport impacts. - Political NA boundaries - not airshed related - does not account for transport. - Number of sources in NSR lower than original intent of program.	

TRANSITIONAL NSR Option 2 New or modified major sources in transitional areas have a major source threshold of 100 tons per year. Sources will be able to rely on "pools" of emission reductions generated by states through their regional or local control strategies for offsets.	- NOx emissions - ozone precursors. - Emissions treated on an area-wide basis - accounting for the transport of emissions. -- Approach available to areas located outside the NOX SIP call area if the areas can meet NAAQS by same time as NOX SIP call area. – Incentive to create larger areas designated transitional rather than smaller nonattainment areas. --Burden of reductions placed on regional strategy (the area) rather than individual source, more flexibility for sources in these areas. -- Inter-area "pools" (intra- & interstate) of available offsets would help provide needed offsets in smaller nonattainment areas.	--Cross boundary impacts might be significant. - Possible environmental justice concerns if offsets come from interstate pools instead of locally. -- Plan may be limited in its ability to deal with localized problems. -- Defining enhanced BACT and managing "reduction pools" may be difficult. -- Legality of enhanced BACT may be challenged if transitional areas are in fact nonattainment areas, other aspects may not be entirely consistent with the CAA. – SIP process must account for offsets and may require retrofits in the future.	*Comments* –Not clear how will this be carried out? -- Industry may delay making reductions to avoid offsets if SIP over-control reductions are available.

TRANSITIONAL NSR Option 2 (continued)	-- Plan allows a faster permitting process. -- SIP over-control is encouraged. -- Management of air resources is placed with State and local agencies. -- Plan encourages improved frequent emission inventory and attainment analysis. -- Plan retains a strong control equipment requirement, i.e., enhanced BACT for NOX.	-- Traditional NSR still be required for other pollutants, especially VOC's. -- Offset pool may not allow a specific area to reach attainment as soon as needed if offsets are allowed from a distant area. -- For states not in the NO_x SIP call, where there is no regional strategy, there may not be enough extra emission reductions to populate the pool, likely to be more problematic in areas with small inventories. -- SIP over-control is credited toward the SIP reduction "pool", not individual companies, possibly viewed as unfair to companies that contribute to the pool. May be a "takings" issue. -- Inter-area "pools" (intra- & interstate) of available offsets could be difficult to manage. – More difficult for areas not in the NO_x SIP call or which must rely on extensive local control measures. -- The SIP process must account for offsets and retrofit controls, if necessary. -- NOx SIP call based on the 1-hr ozone standard but this NSR program designed to address the 8-hr ozone standard.	-- Success of the plan depends upon NOx SIP call modeling. -- Problematic if NOx SIP call is not sufficient to provide for attainment of transitional areas. -- Delay of implementing the NO_x SIP call changed the time frames associated with this plan. -- Inventory pool could grow or shrink for various reasons year to year.

AOI/AOV Option 3. New or modified major stationary sources within an AOI's SpIP, which comply with NSPS limitations and offset their emissions using reductions from within their respective AOI's SpIP are not subject to NSR and PSD requirements for the offset pollutants. Minor sources would be subject to any applicable state minor source review requirements.	-- Dropping the LAER requirement might allow sources to develop more cost-effective reductions.	-- New source growth is limited by the need to have available offsets. -- Potential problems could occur in AOVs where localized impacts of new units would have to be modeled and minimized. -- Areas which are unable to model attainment in their SpIP are likely to retain the more stringent LAER requirement for new units. -- Reliance on NSPS is less stringent than BACT or LAER.	– Information transfer, e.g., the BACT/LAER clearinghouse, is vital to any option chosen regarding the AOV/AOI concept. -- Current BACT/LAER determination processes should not be modified. -- NSPS should not be considered as the acceptable control technology unless they are updated regularly, e.g. every three years.

AOI/AOV Option 4. AOI's SpIP have the flexibility to determine the scope and breadth of its strategy, **and** **add** the potential for trading and banking emissions between new and existing major sources for offsets and other requirements under the SpIP's new source provisions. Interpollutant trading is not allowed. Budget program would accomplish what traditional program would achieve. The option establishes an attainment level budget for emissions from new and existing major sources within the AOI's SpIP. The budget and allocation based on levels expected to meet or make significant progress towards attainment in the AOV(s) is a prerequisite to trading for new sources.	-- Utilizes straight forward mass emission-based accounting methods. -- Provides method to allocate area emissions. -- Attractive to larger nonattainment areas and provide significant flexibility. -- Provides industry with greater flexibility in determining cost effective strategies. – By inclusion of existing sources greater aggregate reductions could occur.	– Could allow RACT rather than BACT controls on new and modified sources. -- Too much reliance on trading and not enough on technology. – Same weaknesses as other mass emission based systems; i.e., air quality impacts are not considered (Some consider this a PRO.) – Program would be complex, i.e., agreements, enforceable, multiple partners, sufficient amounts, etc. -- Once the States/EPA determine the more cost-effective cap & trade concept, industry could weaken NSR severely by arguing for lenient caps. – Unknown level of cap may not necessarily achieve reductions. –Trading portion of this option would serve little purpose for smaller disconnected nonattainment areas if trades came from another area.	-- This option presents the greatest change in approach. The other AOI/AOV options are actually variations on traditional or transitional methods. -- A presumptive cap would be set at a level above and beyond BACT for new sources and modifications. – Greatest departure from CAAA. -- A "conceptual" discussion of a cap & trade program(s) for an AOI(s) is inappropriate, unless the specific level of the cap is known.

AOI/AOV Option 4 (continued) Technology drivers (BACT and LAER) may be retained or are replaced with an equivalent market system for compliance. The budget would be set to achieve and maintain applicable air quality standards. NSR and PSD programs would apply for new sources and major modifications located in areas, if any, not designated as AOIs.			

Subjective Comparison of NSR Options–December 4,2000–Draft

	Controls at Time of Construction	Offsets	Localized Area Protections*	Ability to Deal with Transport	Clarity of Applicability	Comports with Clean Air Act	Comment
Traditional NSR Program	++	++	++	--	--	+++	Seems to provide incentives for small NAA designations, little flexibility, encourages grandfathering
Transitional NSR Program	++	++	--	+	--	+?	Viewed as very similar to traditional NSR, complimentary to NOX SIP call
AOI/AOV NSPS in AOI Offsets from SPIP for AOI sources	+	++	--	++	--	--	Flexibility, incentive for large NAA, strong on offset, weak on technology
AOI/AOV Trading, banking offsets, flexibility for controls, declining budget.	+/-	+++	--	++	+	--	Maximum flexibility, incentive for large NAA, strong on offsets, weak on technology. Netting may not be a factor here. (+) assigned if NSPS is base controls, (-) if less controls.

*Localized area protections–includes ambient impacts analysis and alternatives analysis (e.g., siting, sizes, etc.).

DRAFT
Matrix of NSR Options With STAPPA/ALAPCO Principles

NSR Option	Traditional	Transitional	AOI/AOV 3	AOI/AOV 4
S/A Principle				
Control at time of installation	++	++	+	+/-
Future limits on new source operation	+++	+	-	-
Local Air Quality Impact Assessment	++	+	--	--
Future MACT/RACT will help	+	++	+++	+++
No netting out of BACT/LAER	---	---	+	+
NSPS need updating	NA	NA	+	NA
BACT/LAER Clearinghouse	NA	NA	NA	NA
PALS are supportable	NA	NA	NA	NA
Timeliness and Certainty	---	++	+++	+++

AOI/AOV 3 is NSPS in AOI with offsets generated by SpIP
AOI/AOV 4 is flexible control on new units; trading and banking for offsets; declining budget

2ND DRAFT (12/4/2000)

STAFF PAPER -- DOES NOT REPRESENT EPA POLICY OR POSITION -- STAFF PAPER
October 31, 1997

Concept Paper on Implementing the New Source Review Program in Transitional Areas Under the 8-hour Ozone Standard

Purpose of Concept Paper

We, the Environmental Protection Agency, are committed to developing flexible, common sense approaches for implementing the New Source Review (NSR) program under the new 8-hour National Ambient Air Quality Standard (NAAQS) for ozone. Consistent with the implementation framework set forth in the President's July 16, 1997 Directive,[1] we intend to minimize the changes States will need to make to their existing programs in ozone nonattainment areas that will be classified as transitional. This concept paper describes how we intend to address the NSR requirements under part D of title I of the Clean Air Act (the Act) consistent with the President's Directive and taking into account the regional nature of the ozone problem and its potential control strategies. We will incorporate provisions reflecting these approaches in a forthcoming rulemaking that we expect to propose by March 1998 and promulgate by December 1998.

Summary of Transitional Program Requirements

From the perspective of sources, transitional program requirements will be very similar to existing major source preconstruction review requirements under State Prevention of Significant Deterioration (PSD) programs. We expect only minor changes will be necessary to States' current permitting programs to accommodate these changes. New or modified major sources of ozone precursors in transitional areas would be subject to a major source threshold of 100 tons per year. Although transitional NSR programs will require that major new source growth be offset, in contrast to the current process where sources obtain offsets, sources will be able to rely on "pools" of emissions reductions generated by States through their regional or local control strategies. Consequently, the burden on individual sources for finding offsets will be eliminated. Changes to the Best Available Control Technology (BACT) analysis under the PSD program will take into consideration the regional

[1] The July 16, 1997 Directive is entitled "Implementation of Revised Air Quality Standards for Ozone and Particulate Matter."

nature of some pollutants, such as ozone formation. We expect this to result in technology decisions which will satisfy the Lowest Achievable Emission Rate (LAER) technology requirement for transitional areas.

Programs for Transitional Nonattainment Areas

One of the flexible, common sense strategies in the President's Directive is a new classification for areas that are attaining the 1-hour ozone standard, but not the 8-hour standard, by the year 2000. These areas may be classified as "transitional" ozone nonattainment areas if they meet certain requirements.

In the eastern United States, most new ozone nonattainment areas are expected to attain the new 8-hour standard solely by implementing control measures to comply with our rule for regional nitrogen oxide (NOx) reductions.[2] These areas are eligible to be classified as transitional if, by 2000, they (1) are meeting the 1-hour ozone standard, and (2) submit attainment plans that include control measures to achieve the required regional NOx reductions, and, for the very few areas that may need them, (3) submit any additional local control measures needed for attainment of the 8-hour standard. The attainment plan submittal date of 2000 for transitional areas is 3 years earlier than is otherwise required for areas not meeting the 8-hour standard. Areas that are not subject to requirements for regional NOx reductions are also eligible to be classified as transitional if they (1) are meeting the 1-hour ozone standard by the year 2000, (2) by 2000 submit plans containing local control measures that will result in attainment of the 8-hour standard, and (3) provide for the implementation of these measures on the same time schedule as the regional transport reductions.

After making modest revisions to their programs for reviewing new and modified major sources, States will be able to use these programs to meet NSR requirements in transitional areas. Because a prerequisite for the transitional classification is that areas be in attainment of the 1-hour ozone standard, it follows that, in most instances, the existing programs in those areas will be State Prevention of Significant Deterioration (PSD) programs.

Several factors warrant a flexible approach for implementing NSR in transitional areas. Transitional areas, by definition, will not be violating the 1-hour ozone standard. Moreover, the vast majority of these areas will be able to attain the new 8-hour standard solely through regional NOx reductions and hence are only temporarily nonattainment. In order to receive the transitional classification, areas will need to submit an air

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[2] On October 10, 1997, EPA's Administrator signed a proposed rule that if finalized, would require 22 States and the District of Columbia to submit SIPs that reduce emission that contribute significantly to the regional transport of ozone.

quality plan based on the regional strategy and, if necessary, include additional measures demonstrating how the standard will be attained.

We believe that early adoption of attainment plans will lead to emissions reductions and, therefore, health benefits earlier than would otherwise occur. We believe the transitional classification for ozone nonattainment areas is authorized in light of the statutory authority Congress has provided under the Act and under general principles of administrative law and statutory construction. We have provided flexibility for areas in the past, and we have interpreted and applied the Act pragmatically, consistent with its objectives, in order to avoid imposing unnecessary burdens on States and sources. The transitional classification is consistent with these prior efforts, and it represents an application of those principles in a new context.

NSR Permitting Requirements

Under the Act, permits issued to major new and modified sources of ozone precursors in ozone nonattainment areas must meet NSR requirements set forth in part D of title I. Under EPA's interpretation of the Act, while part D subparts 1 and 2 apply to areas designated nonattainment for the 1-hour ozone standard, only subpart 1 applies for the new 8-hour standard. Consequently, the NSR requirements for transitional areas are set forth in section 173. Section 173 primarily requires that prospective new or modified major sources (1) obtain emissions reductions (i.e., offsets) to offset their projected increased emissions, and (2) comply with LAER. This section addresses these requirements as well as the major source applicability threshold, the pollutants that will be considered ozone precursors, and other NSR program requirements.

Emissions Offsets

A key provision of the part D nonattainment NSR program is that a new major source or major modification to an existing major source may be permitted in a nonattainment area only when its proposed emissions would not interfere with reasonable further progress (RFP) towards attainment of the applicable NAAQS. Typically, the permit applicant has been responsible for showing, among other things, that the increased emissions from the project will be offset by sufficient creditable emissions reductions from existing sources. This demonstration generally takes place in a source-specific review in which the permit applicant identifies and receives approval for offsetting reductions.

To qualify as NSR offsets, emissions reductions must (1) result from sufficient contemporaneous reductions in actual emissions,(2) be obtained from the same nonattainment area or another nonattainment area of equal or higher classification that contributes to the NAAQS violation in the area in which the source would be located, and (3) comply with other creditability criteria pertaining to the quantifiability, permanence, and

enforceability of the emissions reductions. An offset may be secured from existing sources that agree to creditable and enforceable reductions of their actual emissions (such as through the installation of additional air pollution control devices, a switch to a cleaner fuel, or a curtailment in the level of operation), from sources that shut down, or from offset "banks" that some States have implemented to track emissions reductions.

In contrast to the current, source-specific process for obtaining an offset in most States, for implementation of the NSR program in transitional areas, we are encouraging States to rely on intra- or interstate "pools" of emissions reductions to meet the offset requirements of part D. Offset pools would be composed of actual emissions reductions that will be achieved as a result of regional (and sometimes local) NOx control strategies. States would allocate a subset of their emissions reductions generated as part of the regional strategy for the purpose of offsetting new source growth. States also would be responsible for managing the pool of offsets and their availability to individual sources. Hence, where a pool of offsets is available, the burden on individual sources for finding such offsets will be eliminated. Furthermore, in contrast to offset ratios ranging from one-to-one to one-and-a-half-to-one for the 1-hour ozone standard, we intend that emissions increases from new or modified major sources of ozone precursors in transitional areas would be offset with an equal actual emissions decrease, that is, with a one-to-one offset. This innovative approach to meeting the offset requirement should ensure no additional burden to sources compared with the existing PSD ambient impact requirements, because offsets will be drawn from a pre-existing designated pool.

We believe this approach is permissible so long as the use of such reductions as offsets is consistent with section 173 of the Act and the State's attainment strategy. For example, a State that will achieve a certain level of actual emissions reductions as part of its NOx regional transport strategy could allocate a portion of those projected reductions to an offset pool for anticipated new source growth. The State could then rely upon such emissions reductions to meet the nonattainment NSR offset requirements for permitting major sources. If necessary, the State may also include in its offset pool emissions reductions from a local control strategy.

Under this approach, as part of its State Implementation Plan submittal, a State would commit to ensuring that the emissions reductions counted in the offset pool actually occur. On a periodic basis (e.g., every year or every other year) the State must demonstrate that the permitted amount of emissions increases from major new source growth is matched by a sufficient amount of creditable, enforceable, and contemporaneous emissions reductions from the offset pool, and that the reductions have accrued during or prior to the year (or other required period) of the major new source growth. In addition, a State must show that sufficient reductions have occurred within the same nonattainment area as the new source growth or from other nonattainment areas that have an equal or higher nonattainment classification and contribute to the nonattainment problem in the area where the proposed source will locate.

States will need to implement tracking systems to monitor the pool of offsets in order to demonstrate that the emissions reductions that were used to offset new source growth during the prescribed period of time meet the criteria listed above. We will work with our stakeholders, especially States, to develop these tracking systems, including remedies for any shortfalls that are identified through the tracking systems.

While most transitional areas will not need to develop attainment demonstrations, for those transitional areas that do need a demonstration, emissions reductions used to offset new source growth can be drawn from the State's attainment demonstration so long as the demonstration accounts for major source growth. States should take care not to draw offsets from any emissions reduction specifically mandated by the Act or used to satisfy an Act-mandated program, e.g., Reasonably Available Control Technology (RACT). In light of the abundant NOx reductions that will result from the regional NOx strategy, there should be ample excess reductions to provide the offsets necessary to accommodate anticipated major new source growth. Reductions resulting from a declining cap-and-trade program or an emissions budget program may be used as offsets, provided such programs generate actual emissions reductions beyond RACT and are consistent with any required reductions for RFP and attainment.

In addition to intrastate offset pools, we intend to allow interstate offset trading programs. Participating States would need to have a protocol in place to track and monitor the use of interstate offsets so that any particular reduction is credited or allocated only once. An emissions reduction occurring in one State could not be used in that State to offset new source growth and then used again in another State to offset new source growth there as well.

The pool of offsets approach described above could also be used in existing 1-hour ozone nonattainment areas, or in nonattainment areas for other pollutants, which are adversely affected by regional transport (either intrastate or interstate). Thus, in situations where a standard has yet to be attained, States may rely on emissions reductions achieved through a regional or local emission reduction program where transported emissions are contributing to their existing nonattainment problems. Sources would still be subject to the appropriate part D requirements, however, including the specified major source thresholds and offset ratios. Similarly, areas within the Northeast Ozone Transport Region would be allowed to use a pool of offsets as described above, although these areas may need to continue meeting the requirements applicable to the Ozone Transport Region (OTR) under section 184 of the Act. We will be addressing the issue of NSR requirements in the OTR under the new ozone NAAQS in a separate document.

Control Technology Requirements

Another key provision of the part D nonattainment NSR program is that, in order to be permitted, major new and modified sources must minimize their emission rate by complying with specific requirements for the installation and use of control technology. Sources locating in nonattainment areas must apply control technology to achieve LAER, which is generally the most stringent emission limit contained in a SIP or achieved in practice. Sources locating in attainment or unclassifiable areas must apply best available control technology (BACT) under the part C PSD program. Determinations of LAER and BACT technology are made on a case-by-case basis when the State or EPA acts on an individual source's permit application.

A BACT analysis typically is done on a case-by-case basis and requires consideration of energy, environmental, and economic impacts in determining the maximum degree of reduction achievable for the proposed new source or modification. In a BACT analysis, the most stringent emission limit, including the limit representing LAER and its associated control technology, must be considered. If the most stringent limit is rejected as BACT for a particular case, that decision must be supported by an analysis that shows that the most stringent limit should not be chosen in light of the costs of (or other considerations involved in) achieving it. For example, if the most effective control technology would impose unacceptably high costs because of site-specific factors, that technology could be rejected as BACT for the proposed source. In this way, BACT may be less stringent than LAER.

Historically, BACT analyses have focused on site-specific and other local environmental impacts associated with the various control options and pollutants under review; regional environmental impacts from long-range transport of pollutants generally have not been considered. To recognize the regional nature of the ozone problem, we intend to require in a forthcoming rulemaking that regional environmental impacts from pollutants such as ozone be considered in BACT determinations. This requirement would apply for all PSD analyses, and it would ensure that BACT analyses consider all appropriate criteria in the selection of the required level of control. In attainment and unclassifiable areas where emissions of a particular pollutant do not contribute to an inter- or intrastate transport problem, the selection of BACT would not involve the considerations of the regional impacts analysis. Our intention to revise the PSD requirements for BACT to recognize the regional nature of certain air pollution problems (e.g., ozone formation) is a separate matter not associated with issues specifically related to transitional areas and the new ozone standard.

We believe that the consideration of adverse regional environmental impacts will result in BACT determinations in transitional areas that will require the use of the most effective technologies available, if not the most stringent limits. Including the benefits of reduced pollutant transport in the BACT analysis will likely result in requiring more effective technology than would occur absent the consideration of these benefits.

Because of circumstances unique to transitional areas, we think it is reasonable to conclude that for any specific new source any difference between "enhanced BACT", described above, and LAER under the current approach would be *de minimis*. As mentioned above, the application of enhanced BACT in transitional areas will result, in many cases, in emission limits that are closely similar, if not identical, to what otherwise would be required by a LAER determination under the Agency's current approach. Furthermore, we believe that the number of major new or modified sources in transitional areas that would be subject to NSR is likely to be very small. Thus, any differences between enhanced BACT and LAER in transitional areas will not have a significant adverse effect on those areas' achievement of the ambient air quality standard. The requirement to offset emissions remaining after the application of controls will ensure that no additional ambient impact will result from a new major source or major modification regardless of any difference between LAER under the current approach and enhanced BACT.

We are considering including a provision in our rulemaking to require States that implement transitional NSR to impose an additional offset equal to any difference between BACT and LAER under the current approach. This additional offset could be derived from the pool of offsets established by the State.

Major Source Applicability Threshold

Under the general part D NSR requirements, the applicability threshold for "major stationary source" is defined as 100 tons per year of a nonattainment pollutant. In contrast, the major source threshold under the PSD program is either 100 or 250 tons per year, depending upon the type of stationary source undergoing review. To be consistent with the relevant part D NSR requirements, new or modified sources of ozone precursors in transitional areas would be subject to a major source threshold of 100 tons per year.

Ozone Precursors

Currently, only VOCs are expressly regulated as ozone precursors under the current PSD regulations. We intend to clarify our PSD and NSR regulations to ensure that NOx is included as an ozone precursor in all PSD and NSR programs. Where appropriate, for both PSD areas and transitional NSR areas, States would be required to modify their existing programs to include NOx as an ozone precursor. In addition, as part of the offset pool approach, we believe at a minimum it is generally appropriate to allow trading of NOx reductions for VOC increases in transitional areas and nontransitional areas not subject to subpart 2. States may prohibit such trades in circumstances where it may not be appropriate to allow them. We will work closely with States to form the policy on this matter.

It is important to note that only major new and modified sources of ozone precursors will be subject to the NSR program for transitional areas. Consistent with established NSR and PSD applicability rules, major sources of other pollutants which emit significant, but not major, amounts of an ozone precursor will not be required to undergo part D NSR for ozone transitional areas because part D NSR applies only to major sources of ozone precursors. They also will not be required to undergo PSD review for the ozone precursors because nonattainment pollutants are not subject to PSD. Nevertheless, a major source with significant emissions of NOx will continue to be subject to PSD review with respect to the NO_2 NAAQS and increments.

Additional NSR Requirements

In addition to the emissions offset and control technology requirements discussed above, and consistent with current NSR requirements under section 173, sources locating in transitional areas will be required to (1) certify statewide compliance, and (2) perform a benefits analysis that considers alternative siting and operating options. We believe these requirements will not impose a substantial burden on permit applicants or permitting authorities. The certification of statewide compliance is a written statement by the applicant that all other major stationary sources that he or she owns or operates in the affected State are in compliance, or on a schedule for compliance, with their applicable emissions limitations and other standards under the Act. The benefits analysis considers alternative sites, sizes, production processes, and environmental control techniques for the prospective source to show that the benefits of the proposed construction will outweigh the environmental and social costs.

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This is a joint issue paper prepared by representatives in the Base Programs Analyses and Policies Work Group (BPAPWG) and the National and Regional Strategies Work Group (NRSWG) as part of the Federal Advisory Committee Act (FACA) Subcommittee process. It is not an EPA document. It is subject to further discussion by the work groups and Subcommittee. Interested people should forward their comments to Greg Schaefer (BPAPWG) at 303/293-7953.

September 19, 1996

JOINT WORK GROUP ISSUE PAPER ON NEW SOURCES: CONSIDERATIONS FOR THE IMPLEMENTATION OF NEW AIR QUALITY STANDARDS/REGULATIONS

ISSUE:

This issue paper discusses the issues and options for addressing emissions from and modified major stationary sources with respect to the proposed changes to the designation procedures (to AOI and AOV) for implementing new ozone standards, particulate matter standards and / or promulgation of regional haze rules. Because the AOI/AOV designation procedure does not specifically and mechanically attribute non-attainment or attainment designations for presumptive controls, the implementation of the NSR program must be adapted/reconciled with the AOI/AOV system for the AOI/AOV designation procedure to function properly.

NSR is structured specifically to be implemented on the basis of the current non-attainment / attainment status of the location of the facility. The recommendation to change the designation procedure to AOI and AOV directly conflicts with the current NSR implementation rules for attainment/non-attainment designations. AOVs are not necessarily presumed to have or require controls. After AOVs and AOIs are established, the development of a "Spatially Integrated Plan" (SpIP) would determine the necessity, depth and breadth of new and existing major source controls to assist the respective AOV in reaching attainment. It is envisioned in this paper that the SpIP would address the growth of emissions in the AOI for all sources categories (such as is currently done for single pollutant State Implementation Plans). The concept that the SpIP defines the control area is one of the fundamental assumptions on which this paper is based. The development of the strategy to achieve and maintain applicable air quality standards would be done through the SpIP process. Although there is inherent conflict between the structures, there are several options for integrating (and possibly improving) the new source requirements with the proposed AOI / AOV designation structure and planning processes.

The EPA is currently reviewing the existing NSR Program, with the intent of reforming and streamlining the requirements. This paper does not intend to duplicate that effort. The FACA Subcommittee has the opportunity to look at the flexibility and cost effectiveness of new source requirements while still achieving its intended environmental goals. These concepts will be reflected in the various options discussed in this paper. For example, new standards may require looking at regional rather than local planning and control requirements. The Base Programs and National Regional Strategies Workgroups have spent a good deal of time discussing the merits of Areas of Violation, Areas of Influence and transport. As this reflects a change of view in air quality management, a new look at different regulatory options is warranted.

This paper provides some discreet options, along with their advantages and disadvantages. While it is recognized that there are many more options that could have been considered and discussed, it was decided that these options may be representative of a reasonable spectrum. One obvious option that will not be discussed in detail is the

continuation of the current area designations in their current form. This option would retain the current attainment/non-attainment designations, as well as all of the control strategies. This option is contradictory with the new concepts of Areas of Violation (AOV) and Area of Influence (AOI).

The following options are presented in concept form. It is anticipated that a group such as a New Source Review Subcommittee would address the details of the recommended option, as well as the technology forcing aspects. It is envisioned this would be consistent with the Interim Implementation Policy. The options were developed based on the following principles:

- The selected option should be as cost-effective as possible.
- Flexibility should be built into the selected option to reflect the unique aspects of various regions (i.e., control strategies, addressing site-specific impacts, etc.).
- The selected option should encourage real reductions in emissions and should provide market incentives, where possible, to achieve the reductions.

The following options were outlined:

OPTION # 1. The same planning and control requirements would be required for all new major stationary sources or major modifications of stationary sources in AOI SpIPs[1].

> ***Advantages:*** Relatively simple to apply and administer (once an AOI has been set up). May reduce the opportunity for "shopping" for a location to site a facility. May level the playing field from a competitive standpoint.
>
> ***Disadvantages***: Conflicts with the intent of the AOI/AOV paper. National aggregate control costs may be higher under this option, while it is also likely to be the least cost-effective. Political acceptance of this option may be difficult in different regions. This option is similar to the concept of "Clean Air Corridors" that was considered by the Grand Canyon Visibility Transport Commission. In that process, rural areas or states with little industrial activity felt disadvantaged. There are no offset requirements for minor sources.

OPTION # 2. Some measure of controls would be required within the SpIP of the AOI. However, different planning and control requirements could apply within an AOI. The decision would be made by the institutional mechanism being defined in the Institutional Mechanisms paper, for the AOI with regard to the implementation of the Spatially Integrated Plan (SpIP) for that AOI - which may have cause to differentiate strategies between locations and sources within the AOI[2]

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1 As an example, AOI's could be managed as "non-attainment" areas, with Lowest Achievable Emission Reduction (LAER) requirements and offset requirements at least at a 1:1 ratio. It is emphasized that this is an example rather than a proposal.

2 As an example, major new or modified sources that significantly contribute to violations of national air quality standards within an AOI may be required to, among other things (i) comply with LAER, and (ii) obtain emission offsets at least at a 1:1 ratio. A new or modified major stationary source located in other parts of the AOI or in Areas of Attainment (AO) must, among other things, (i) show that it will not cause or contribute to a violation of a NAAQS or PSD increment, and (ii) apply BACT, which must be at least as stringent as any applicable NSPS. Modifications would be subject to NSR only if the resulting emissions increase exceeds a "significant" threshold. Again, it is emphasized that this is an example rather than a proposal.

Advantages: Provides some restriction on emissions growth in all relevant areas. Prevents emissions growth in portions of the AOI from major stationary sources. Recognizes that sources within an AOI may not have the same impact. More cost efficient than Option 1. Addresses the issue of requiring less stringent controls on sources in an AOI that could impact air quality in an AOV. Grants local and state air regulatory agencies flexibility in designing and implementing an air quality strategy, e.g., the agencies have discretion in developing the control strategies.

Disadvantages: May re-establish a competitive differential within the AOI. Substantial difficulty and complexity in identifying the "relevant" areas of AOI's and sources to control. Could be used to pick out specific source categories for additional level of stringency that is not required of other new or modified major sources (not existing sources). Could create an inequity between new or modified sources in the same source category. It is very difficult to demonstrate the effect of emissions from a single new and or modified source on the AOV.

OPTION # 2.a. A rebuttable presumption would be built into the AOI strategy so that sources could demonstrate that the level of specified controls are not needed[3]. This option would only apply to major new stationary sources or major modifications of stationary sources.

Advantages: Provides specific sources to have the opportunity to have input on the level of required controls. Could allow avoidance of unnecessary controls.

Disadvantages: May be difficult to demonstrate with credibility (i.e., modeling of individual sources). May not be able to build a new facility quickly if more stringent controls are contested. May result in more politicization of the process.

OPTION # 3. New or modified major stationary sources within an AOI's SpIP, which comply with NSPS limitations and offset their emissions using reductions from within their respective AOI's SpIP are not subject to NSR and PSD requirements for the offset pollutants. Minor sources would be subject to any applicable state minor new source review requirements. This concept was developed in an effort to provide a bridge from Options 1 and 2 to Option 4 (full budget and trading program).

Advantages: Addresses growth of emissions from major sources in AOI's May simplify the permitting process. Major sources may not need to be subject to PSD. While offsets may be required in an AOI, LAER may not be required.

Disadvantages: Relatively complex concept. Major sources still face NSR requirements for emissions that are not offset. Limits growth of major sources to the extent offsets are available in AOI. May not fully protect the PSD increment or protect Air Quality Related Values (AQRV's) in Class I areas. Emissions may increase in localized areas.

OPTION # 4. This option would proceed as in option #2, allowing the AOI's SpIP the flexibility to determine the

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[3] This could be a feature of any option or sub-option. These demonstrations could include cost-effectiveness, or identify a threshold below which there is not significant impact to ambient concentrations.

scope and breadth of its strategy, **and add** the potential for trading and banking emissions between new and existing major sources for offsets and other requirements under the SpIP's new source provisions. Set up an attainment level budget for emissions from new and existing major sources within the AOI's SpIP. The budget and allocation based on levels expected to meet or make significant progress towards attainment in the AOV(s) is a prerequisite to trading for new sources. Technology drivers (BACT and LAER) are replaced with an equivalent market system for compliance. There would be no inter-pollutant trading allowed, but inter-source category trading could be allowed. Trades would not supercede limits for maintaining local ambient standards (e.g. CO, NO2, and SO2, etc.). The budget and trade program would apply to specific emissions (i.e., NO_x, PM, SO2, etc.), with the pollutant(s) of concern identified in the SpIP. Budgets could be established by source category. This option recognizes those statewide or regional processes currently in place that may result in a budget and trading program (such as the Ozone Transport Assessment Group and the Grand Canyon Visibility Transport Commission). The budget would be set to achieve and maintain applicable air quality standards. NSR and PSD programs would apply for new sources and major modifications located in areas not designated as AOIs.

> ***Advantages:*** Program would provide real emissions reductions and limits. This option could provide a vehicle for meeting new source requirements at the lowest cost. Provides incentives for existing facilities to implement control strategies to enable the sale or transfer of credits for economic development purposes and provides incentives for existing sources to focus more on the environmental efficiency of their operations. Could simplify and expedite the permitting process. Removes the disincentive to siting and constructing new sources. Allows the ability to set program targets IN progressive, incremental steps (such as was done in the phase I and phase II so_2 program). Could allow for development of a budget for mobile and area sources under the SpIP. Lets the economy/market place decide how to comply and to be the technology driver.
>
> ***Disadvantages***: Will the reduction of a ton of NO_x at one point translate to a benefit to air quality in another? If the budget is allocated and administered properly, the evolution of the integration of new source requirements and the trading system would converge to yield technology drivers for new and old sources as the credits become scarce. May be difficult to get to a common currency between source categories. There is complexity in setting the budget, as well as setting allocations.

OPTION # 4.a. Same as Option 4, only inter-pollutant trading would be allowed. This may complicate the accounting process and present a risk that individual criteria pollutants may be allowed to increase. As discussed in the PM and PSD sections of the paper, the chemical interactions in specific locations and trade-offs between pollutant reductions is not well known or uniform. Trading between pollutants would be allowed given a demonstration of equivalence in air quality benefit. Once a trading program is established, review of individual trades may not be required. The option should remain open to extend the program to other than major stationary sources at the discretion of the planning process.

RECOMMENDATION:

Option number 4, with a phase-in to Option 4.a. (inter-pollutant trading), was the consensus recommendation of those members of the work group who participated in the development of this paper. Individual SpIP's could

implement a demonstration program allowing inter-pollutant trading. Note that there have been several members who have not actively participated in the efforts of the work group.

BACKGROUND

The Clean Air Act has two programs for controlling emissions from new or modified stationary sources.

The Clean Air Act of 1970 established the first regulatory program to control emissions from new stationary sources, the New Source Performance Standard (NSPS) program. The Act required the U.S. Environmental Protection Agency (EPA) to establish technology-based national emission limits for various categories of sources. To date, standards have been established for 74 categories of sources.

The Clean Air Act Amendments of 1977 adopted sweeping set of new requirements, including the New Source Review (NSR) preconstruction permitting program which included provisions for Best Available Control Technology (BACT) and the Lowest Achievable Emission Rate (LAER). In addition, the 1977 Amendments set up a process for reasonable progress in improving visibility in protected areas (e.g. national parks).

The Clean Air Act Amendments of 1990 (CAAA) did little to modify the basic structure of these programs and instead established several new programs, including the Title V Operating Permit Program and Title IV Acid Rain Program. However, Title I of the CAAA of 1990 authorized the EPA to establish visibility transport regions and commissions, as well as ozone transport regions and commissions. In addition, the CAAA of 1990 required EPA to establish a visibility transport commission for the Grand Canyon and, by operation of law, established an ozone transport region in the Northeastern United States.

New Source Performance Standards

This program authorizes EPA to establish national emission limits for source categories that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. EPA was required to review and, if appropriate, revise the standards at least every four years (the CAAA of 1990 increased the review period to eight years). The original purpose was to establish national limits so that source could not "shop" individual states looking for the most favorable (or lenient) location to site a source. In the absence of any other air quality regulatory program, the NSPS program has served a useful purpose.

New Source Review

The NSR program established preconstruction permitting requirements for major new or modified stationary sources in attainment and non-attainment areas. The NSR program for prevention of significant deterioration (PSD) review applies in attainment areas. PSD review requires a source to demonstrate that, among other things: (1) it will not cause or contribute to a violation of a NAAQS or an increment, which represents the maximum allowable increase in pollutant concentration before significant air quality deterioration would occur; and (2) it will use BACT[4]. Sources in non-attainment areas must, among other things: (1) comply with LAER; and (2) obtain emission offsets. The cost of controls is not generally a factor for determining LAER, while cost is a factor for determining BACT.

The review and mandate of environmental controls under the NSR program is done on a case-by-case

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[4] The PSD requirements classify areas based on local land use goals, with each classification differing in terms of the amount of growth that is allowed to occur before significant air quality deterioration occurs (i.e., the allowable increment). Three area classifications exist -- Class I, Class II, and Class III. Note that there are no Class III (industrial) areas in the United States at this time.

basis. However, to make the program more uniform throughout the country, EPA has established a national BACT/RACT/LAER Clearinghouse for use by state regulatory agencies, EPA Regional Offices, Federal Land Managers, the regulated community and the public. This Clearinghouse provides specific examples of the type, extent and emission rate limitations imposed on individual sources. State regulators are then able to judge what would be required of new or modified sources.

PHASE II ISSUES

Following are some of the major issues identified during this process, and will be deferred to phase II They are included in this document as an outline of some of the issues to be discussed in phase II.

$PM_{10}/PM_{2.5}$ Issues

With the promulgation of a $PM_{2.5}$ standard, EPA will need to consider $PM_{2.5}$ increments for the PSD program. As has been discussed in other issue papers, fine particulate modeling is in its infancy and emission factors for $PM_{2.5}$ are lacking. Sufficient resources must be dedicated to the effort of developing and validating the model and emission factors before they can successfully be used as a permitting and regulatory tool. In addition, while ozone modeling has become more sophisticated over the past couple of years, there is till a significant gap in the knowledge of atmospheric chemistry and conversion to secondary fine particulates. EPA looked at adopting increments for ozone around 1980. Due to the complexity of the secondary phase transformation (i.e., VOC or NOx conversion to ozone), EPA elected not to promulgate ozone increments). If $PM_{2.5}$ increments are proposed and promulgated, they would most likely be very small. Using the ranges proposed for the $PM_{2.5}$ standard in the EPA Staff Paper, the increments might look as follows (based on $PM_{2.5}/PM_{10}$ ratios and the process used to set the PM_{10} increments).

	Class I	Class II
$PM_{2.5}$ Annual	1-1.6 ug/m^3	4.25-6.3 ug/m^3
$PM_{2.5}$ 24-hour	1-3.5 ug/m^3	3.6-13 ug/m^3

Options for consideration:

1. Do not propose or promulgate $PM_{2.5}$ increments.

2. Do not propose or promulgate $PM_{2.5}$ increments until such time as accurate models and emission factors are developed and validated. RETAIN THE CURRENT PM_{10} INCREMENT PROGRAM FOR NOW, BUT RECOGNIZE THAT CURRENT MODELS/EMISSION FACTORS ARE NOT ADEQUATE FOR SOME SOURCES.

3. Propose and promulgate $PM_{2.5}$ increments. Commit up front the necessary resources to develop and validate accurate models and emission factors.

4. DO NOT DEVELOP $PM_{2.5}$ INCREMENTS FOR SECONDARY PARTICLES. DELAY DEVELOPMENT OF $PM_{2.5}$ INCREMENTS UNTIL THERE ARE BETTER DATA, EMISSION FACTORS AND MODELS. PM_{10} INCREMENTS MAY SERVE AS A SURROGATE UNTIL THAT

TIME, RECOGNIZING THAT THE CURRENT MODELS/EMISSION FACTORS ARE NOT ADEQUATE FOR SOME SOURCES.

The previous discussion has addressed PSD increments for PM_{10} and $PM_{2.5}$ separately. This discussion was based on the assumption that $PM_{2.5}$ and PM_{10} are separate pollutants. The whole discussion of the PSD program should also be considered in the overall context of current and upcoming regulatory programs.

BASE PROGRAMS ONLY RECOMMENDATION

THE MAJORITY OF THE WORK GROUP SELECTED OPTION NUMBER 4 AS THE PREFERRED RECOMMENDATION.

Permitting

The adoption of new ozone and particulate standards (particularly a $PM_{2.5}$ standard), as well as the potential promulgation of regional haze rules raises many questions about how new or modified sources will be permitted. IF A BUDGET AND TRADE APPROACH IS ADOPTED, MODELING EFFORTS MAY BE REDUCED TO DEMONSTRATE OFFSETS. PERMITTING, IN ITS CURRENT FORM, MAY BE LIMITED TO non-AOIs Some options:

1. Each source will be required to conduct a modeling demonstration for each pollutant (FOR EXAMPLE: ozone, PM_{10}, $PM_{2.5}$, NOX, VOC'S SO2, AMMONIUM NITRATE, AMMONIUM SULFATE AND regional haze). This permitting requirement would apply to all sources.

1.A. The permitting requirement discussed in (1) would only be required for sources that exceed existing thresholds for "significant" emissions.

1.B. The permitting requirement discussed in (1) would only be required for sources that exceed newly-established thresholds.

3. Allow for parametric quantification /engineering analyses is lieu of full source/ receptor modeling. This option could apply to all sources, or to those sources under a certain threshold.

4. Request that the Modeling Subcommittee identify areas for consolidation of modeling demonstrations. For example, can a single model be developed that incorporated several pollutants, thereby decreasing the overall complexity of the permitting process. Guidance should also be sought on how to handle transport in the permitting process. For example, how should background be handled? Are the models accurate enough to use in this process? Does monitoring data support the numbers generated by the models? With regard to the western United States, how should prescribed and natural fires be handled? DOES THERE NEED TO BE A REQUIREMENT TO ADD EMISSION INVENTORIES AND METEOROLOGICAL FIELDS, BY SEASON, FOR AOI'S?

Fine Versus Coarse Particles

The EPA Staff Paper states $PM_{2.5}$ does have some potential for intrusion of the "tail" of the coarse mode during episodes of fugitive dust. Staff recommends a sharp inlet for the FRM to minimize this potential intrusion of coarse model particles. Such intrusions in to $PM_{2.5}$ measurements are not anticipated to be significant in most situations; nevertheless, if subsequent data reveal problems in this regard, this issue can and should be addressed on case-by-case basis in the monitoring and implementation programs. Some considerations:

1. Do nothing and ignore coarse particle intrusion.

2. Recommend that EPA truly consider "coarse" and "fine" particles. For example, EPA states that coarse and fine particles should be considered as separate pollutants. One is comprised of crustal materials, while the other derives from combustion. Yet, a PM_{10} standard would include both coarse and fine particles. Consideration should be given to looking at $PM_{2.5}$-PM_{10} as a better measure of a coarse particle.

3. Consider adoption of a policy that adjusts the coarse particles in the $PM_{2.5}$ fraction. Dr. Dale Lundgren with the University of Florida has developed a statistical approach to making this adjustment, based upon data collected from PM_1/$PM_{2.5}$/PM_{10} trichotomous samplers. **Related PSD Issue**

The current PSD PM_{10} increments are as follows:

	Class I	Class II
PM_{10} Annual	4 ug/m^3	17 ug/m^3
PM_{10} 24-hour	8 ug/m^3	30 ug/m^3

Class III increments have also been established, but no Class III areas are currently in existence. While this program has been successful in some areas, it does have some significant shortcomings, particularly in the western United States. This process is based solely on a modeling demonstration, and does not necessarily rely on monitored data. There are several source categories for which the current PSD program does not adequately or fairly work, including area sources that generate coarse crustal material, such as mining operations, construction activities, etc. Note that agricultural operations are exempt from the provisions of PSD. While the models/emission factors do an adequate job on an annual basis, they are lacking for some sources when used to demonstrate compliance with the 24-hour PSD increment (for PM_{10}). Litigation on this issue has been stayed pending the outcome of the NAAQS review process. There are several options to address this significant problem:

1. Retain the current PM_{10} annual and 24-hour increments, and continue to administer as before.

2. If the PM_{10} 24-hour standard is eliminated, then the problem is resolved, as there will no longer be a corresponding PM_{10} 24-hour PSD increment.

3. Eliminate the compliance demonstration for the 24-hour PM_{10} PSD increment for those sources for which the models/emission factors are not appropriate. In its place, sources would be required to commit to the following:

   a. Operate and maintain an approved PM_{10} monitoring network to monitor compliance with the appropriate PM NAAQS.

b. Incorporate BACT requirements in the permit(s) to control coarse crustal emissions (for those sources in attainment areas).

c. The State regulatory agency must have an adequate enforcement program.

d. There can be no monitored exceedances of the federal PM NAAQS.

In the event that an exceedance is monitored, then all bets are off and modeling may be required. Note that this procedure is current Region VIII EPA policy, and has been successfully used in the Powder River Basin of Wyoming. Also note that this policy has had the side benefit of encouraging additional monitoring.

4. Modify the existing PM_{10} models/emission factors, and demonstrate that they do not over predict concentrations.

ADDITIONAL ISSUES

Should the following issues also be discussed in the context of the New Source Review program:

1. NO_x waivers.

2. Transportation conformity.

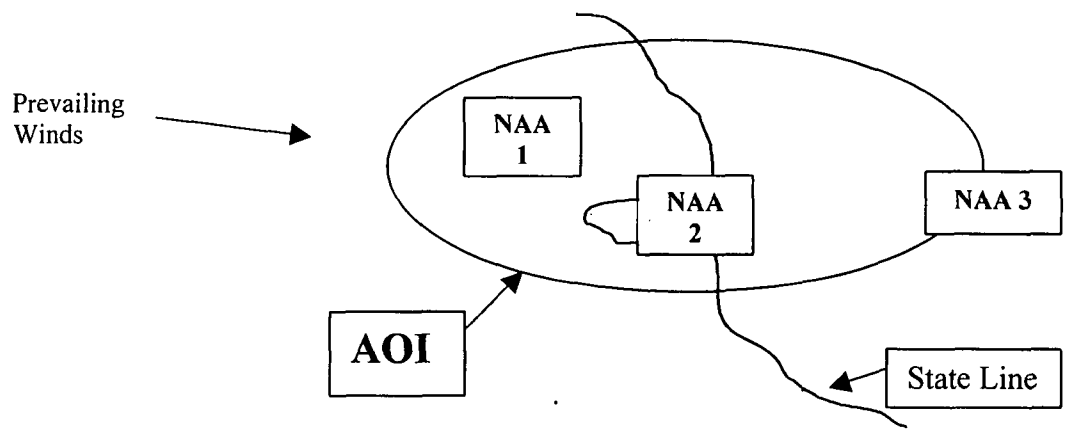
3. Bubble/offsets (i.e., will all pollutants be considered for bubble/offset purposes).

FINAL DRAFT

Linking Nonattainment Areas (NAA) Using the Area Of Influence (AOI) Concept

Overview

- Recommends that nonattainment areas (NAAs) be established for relatively small areas (CMSA/MSA or smaller) but that NAAs within an area of influence (AOI) be held responsible for reducing ozone and it's precursors to acceptable levels throughout the AOI. In simple terms, no NAA within the AOI (in most cases) would have an approvable SIP until all NAAs within the AOI did. New Source Review (NSR) would apply throughout the AOI.



Attainment Date

- Areas within the AOI have the same attainment date.

Defining the AOI (See Attachment 1)

- Goal: to establish the most scientifically defensible AOIs (small or large) as possible.
- Established through a large regional technical analysis and coordination process
  - Process to consider meteorology, emissions density and the appropriateness of different legal mechanisms to control emissions that result in transport.
  - To consider long-distance and local transport.
- EPA establishes default AOI if participating states cannot reach consensus.
  - EPA bases default AOI upon input submitted by affected states and other pertinent data.
  - Default AOI is, by definition, conservative (generally large/includes all potential areas).

Defining the NAA

- Start with CMSA/MSA per EPA guidance.
  - Minimize disruption of conformity process
- Add to, or subtract from area using emissions density concept (i.e. tons per square mile or pounds per capita).
- Benefit: Minimizes disruption of conformity processes.

Control Requirements/Strategies

- All NAAs implement national controls and any agreed upon regional controls.
  - Some control measures should apply throughout (or at least in some portions of) the AOI.
  - Source areas located downwind of all violating monitors within their AOI do not need to implement controls beyond those nationally and regionally agreed upon as long as proof is provided demonstrating that their emissions do not contribute to nonattainment.
- Additional controls determined by each NAA (one size doesn't fit all).
  - Must provide for attainment within the NAA AND the AOI.
  - Use of emissions density approach to be considered.
- May need some kind of "Progress" requirement if worst-case attainment date is used. Needed to insure that controls are implemented as expeditiously as practicable.
  - Rate of Progress (ROP) concept carried forward on a 5-year cycle (documenting emission reductions as a function of total reductions targeted).
  - 5-year reduction target proposed by NAA and approved by EPA. Must consider:
    - Available control measures (what has already been implemented)
    - Cost of available controls
    - Ability to attain early
    - Target does not need to exceed the level needed for attainment within the NAA and AOI
- Permit attainment analysis based upon reduction of emissions density. Allow agencies to include effects of sprawl (VMT increase, etc) depending upon selected control options.
- Cap and trade programs within a defined area should be considered.

New Source Review

- Applies throughout the AOI at same applicability level.
- Technology based approach. True (strong) Best Available Control Technology (BACT) (considering energy, environmental and economics). This would permit agencies to consider and evaluate the co-benefits of multipollutant strategies that could, for example, provide substantial reductions in urban toxics along with NOx and VOC. Costs of additional controls per ton is often less on an aggregate basis then when bifurcated.

- No offsets if sources included fall under some kind of AOI-based emissions cap or "budget" program or other program that adequately addresses stationary source growth.

Conformity

- Done within NAAs.
  - Support simplified conformity process for rural NAAs
- Transportation Conformity budgets set by NAA.
  - Aggregate reductions within the NAA must be sufficient to provide for attainment within the NAA and throughout the AOI. (Allows inter-sector trading).

SIP Approvals

- All NAAs adopt controls such that attainment is demonstrated throughout the AOI.
  - EPA approves all State Implementation Plans (SIPs).
- Scenarios (see figure in Overview):
  1. NAA 1 and 2 have adopted fewer controls than NAA 3. NAA 1 and 2 can attain, but NAA 3 cannot.
     - EPA waits until all 3 NAAs can demonstrate attainment before any areas SIP is approved.
  2. NAA 1 and 2 have adopted more controls than NAA 3. NAA 1 and 2 can attain, but NAA 3 cannot. NAA 1 and 2 have modeling showing that NAA 3 would attain with equal controls.
     - EPA approves SIPs of NAA 1 and 2.
  3. NAA 1 and 2 have adopted more controls than NAA 3. NAA 1 and 2 cannot attain but NAA 3 can. NAA 3 is downwind of NAA 1 and 2.
     - EPA approves SIP of NAA 3 with no additional controls required.
  4. NAA 1 and 2 have adopted more controls than NAA 3. NAA 1 and 2 cannot attain. NAA 3 can - "but for transport". NAA 3 has modeling to show that they could attain if certain reasonable measures are implemented upwind to reduce transport.
     - EPA approves SIP of NAA 3 with no additional controls required.

Inter-Nonattainment Area Planning

- Each NAA would submit a modeling and coordination protocol to EPA describing how technical and policy coordination would be undertaken within the AOI. This could also be a single protocol developed and agreed upon by several NAAs.
- Technical work (modeling) done on an AOI (or larger area) basis.
- Process for coordination on strategy development for attainment within the AOI would need to be defined.

Mid-Course Analysis

- 5 Year cycle
- Revisit data related to attainment status, AOI boundaries, ROP targets, etc.
- Acknowledges need for iterative regional planning process.

Other Factors/Links

- Coordinate planning process to provide for flexibility and timely revisions.
- Develop process to streamline plan approval.

FINAL DRAFT Version Date: 1/8/01

ATTACHMENT 1

Revised Concept Paper for: How to Determine AOI's

The Federal Advisory Committee Act (FACA) originally developed the concepts of Area of Violation (AOV) and Area of Influence (AOI) in 1996. How to most accurately define and apply the AOI concept has always been a political and technical problem, resulting in only the simplest version of the concept being adopted in EPA guidance (AOI/nonattainment area = AOV+CMSA). Further refining the concept is difficult because the geographic coverage of a true AOI changes depends on the metrological conditions for each monitor, each time it violates a standard. FACA developed several different options for defining an AOI, and ultimately recommended some basic guidance on how to proceed. This concept paper builds on the FACA recommendations in a way that encourages states to work together to define AOIs.

Goal: Establish the most scientifically defensible AOIs (small or large) as possible while allowing maximum regional flexibility on size and extent of the AOIs.

Concept: States work together with flexible guidelines to define mutually agreeable AOIs. In the event that a conflict that cannot be worked out by the states, the planning body can request that EPA resolve the dispute by using available analytical data provided by the states and other pertinent sources. EPA provides the platform for conference calls, regional meetings, data transfer and databases, and pushes the process along to keep reasonable rate of progress.

Proposed Process:

1. Start with 2 large airshed analysis groups (LAAG) that include all 48 continental states, East and West – divided by the Continental Divide. (Assumes transport across this major topographical feature is at a regional minimum.) *The intention here is to quickly reduce the 2 LAAGs into groupings of states based on common airsheds/air pollution problems so that they can work more closely together to further study the problem.*
   - States in each LAAG work together to:
     - A: Decide to allow some states to exit the process that obviously do not contribute to or receive ozone transport.
     - B: Subdivide remaining regions into distinct air pollution locations and airmasses on a technical basis. The states involved must feel confident that transport between these regions is minimal.

2. Develop regional airshed analysis groups (RAAG) for each identified region to study the airshed mechanics for developing and refining AOI boundaries (small or large) based on data analyses.
   - Boundaries may be refined by considering:
     1. Back trajectories from violating monitors to identify pertinent regions of high emission density.
     2. Regional modeling for contribution.
     3. Topography, known transport mechanics in region, and other applicable reputable research.
     4. The appropriateness of different legal mechanisms to control emissions that result in transport.

Alternative Proposed Process:

This alternative is proposed due to concerns primarily with a group, the size of all states east of the continental divide, being able to come to consensus on contribution between states and defining the smaller common airsheds/air pollution problems.

1. Instead of 2 LAAGs, start with the five Regional Planning Organizations (RPO) as defined for regional haze purposes.

   Pros:

   A: The number of states is more manageable.
   B: Lines of communications between member states have already been established for these types of discussions.
   C: A method for intercommunication between RPOs is being developed.
   D: The RPOs somewhat reflect short range transport for many nonattainment areas.

   Con:

   E: Primary drawback is addressing nonattainment areas which are affected by areas in another RPO. This type of situation is not unique to this process and can be addressed by the affected RPOs coming together and defining the boundary for that particular area.

2. Add to RAAG discussion after paragraph 2. in the Proposed Process for the original option;

   - Implemented as follows:
     A: RPOs address AOIs within their boundaries.
     B: AOIs which cross RPO boundaries are addressed by those within the AOI boundary (as defined by the RPOs within which the AOI resides.)

Draft Document (1/4/01)
SIP Development Issues – Data Considerations

Data is important during all stages of NAAQS implementation. It is used:

- to inform the public as to health threats from pollution;
- to determine attainment or nonattainment status;
- to determine the reach and effect of pollutant transport;
- to determine the areal extent of a control region (AOI/AOV concept);
- to help determine the types and amounts of controls required;
- in attainment demonstrations;
- in "no significant contribution" demonstrations;
- in redesignation requests and the development of maintenance plans.

Data collection is a labor intensive and expensive proposition, therefore analysts never have all the data they really need to derive the most thorough and objective conclusions to the problems at hand. It is therefore essential that newly developed plans for data collection be integrated with existing networks in ways that optimize resources in order to achieve all the tasks outlined above.

Ambient air, meteorological, and emissions data needs

Noted data inadequacies:

- spotty areal coverage of co-located ambient meteorology and air quality conditions
- lack of comprehensive precursor data (currently only exists for a limited number of 1-hour ozone nonattainment areas)
- few and relatively short meteorological episodes for model input
- sparse upper air meteorology, air quality and precursor data
- emissions inventories of varying quality across the country (best data exists for 1-hour nonattainment areas)

Overcoming data inadequacies.

- establish clear requirements for a national monitoring network that provides relatively uniform coverage (SIPs from different regions should have comparable "minimum" data sets for consistency in analysis and modeling – some complex circumstances may/do require greater data density)
- continue funding for the EMPACT program
- expand list of areas covered by the EMPACT program
- expand the PAMS network to provide information for newly designated nonattainment areas (e.g. change population benchmarks, or require monitor siting based on emissions densities)
- integrate SLAMS/NAMS data, and various special purpose monitoring (e.g. CASTNET) and industrial data into a single data base, in order to attain better geographic and time coverage for use in endeavors such as AOI determinations, model validation, future regional strategies, and ozone trend/tendency evaluation

- consider using non-reference method data to perform tasks exclusive of determining nonattainment areas
- evaluate existing monitor data and sites in order to determine which sites are not producing representative data (e.g. because of less than optimal siting due to problems around the sites, or because of less than optimal siting perhaps across political borders), and re-site monitors where more data is needed (to conserve monitoring resources). This initiative would address a regional consistency problem, so in order to avoid discontinuing sites that have developed useful time series of data, the effort should be *selectively* pursued
- improve data on emissions including source testing. Encourage broader use of "cheap" CEMs [Part 60 rather than Part 75] – especially at mid-size and larger industrial facilities where not required.
- eliminate monitoring disincentives (see below)

Monitoring disincentive problems

Current regulation provides no requirement to determine the air quality in small cities, towns, and rural areas that do not meet population benchmarks. Counties that lack ozone monitor data currently have expectations that they will be classified as attainment/unclassifiable. This situation, although economically advantageous and politically benign, does no justice for public health nor does it accommodate for the possibility of ozone precursor transport. Many people believe their air quality is good, while in reality, it is not. Therefore it is essential that SIPs developed for the 8-hour ozone NAAQS include requirements for ozone monitoring in those areas designated unclassifiable. Filling in the data gaps will also assist us in gaining a more complete understanding of our ozone pollution problem.

It is unlikely that states will voluntarily set up more monitors in areas where they are not required by law (citing both political and economical hardship.) Therefore, some sort of federal requirement is necessary. Modeling disincentives should be addressed and may be overcome in flexible implementation scenarios.

Possible monitoring approaches:

- monitors be required in each county adjacent to a nonattainment area. (Although permanent siting is preferred, if monetary resources are scarce, the monitors may be rotated between several sites. It is recommended that the monitors remain on site for a period of at least five years.)
- monitors be placed in counties downwind of major sources
- monitors be placed in areas of high emissions and/or population density (not just MSAs)
- require air quality monitors be funded by new/old Title V sources of ozone precursors in unclassifiable counties
- invoke some sort transitional attainment status for newly identified violations. (e.g. no NSR until the area has some time to come up with a reasonable attainment plan.)
- delay designation process for newly identified violations
- establish special purpose monitor network (not used in designations) to meet additional data needs
- provide a financial incentive (e.g. lowered permit fees) to industry in return for additional monitoring (state oversight of siting and qa/qc of new monitors is required)

Data analysis concerns

The collection of data is unnecessary if it does not get analyzed. It should be understood that data already collected is being used in ongoing analysis programs, and that all of the data needs outlined above will support these programs and anticipated new programs. As our knowledge of the science advances, our analysis techniques will improve and new ones may develop to better address our air pollution problems.

Possible approaches to advance data analysis techniques:

- set up a program that will allow for improved sharing of data analysis approaches and shortcuts through, for instance, an electronic bulletin board, web site, or listserver
- continue to provide budget support for training on data analysis techniques
- continue funding for the ozone mapping web site through the EMPACT program
- work on developing widely accepted approaches for the use of wind data and trajectories to establish upwind/downwind relationships
- work on improving trend/tendency analyses that filter out meteorological effects
- work to integrate 8-hour ozone monitoring and analysis programs with other programs (e.g. regional haze and PM2.5)
- generate new meteorological episodes for regional modeling (by looking at new episodes, we may discover things we had not known before)

DRAFT

CONFORMITY SUBGROUP DISCUSSION PAPER

The following is a discussion of the different possible combinations of 1-hour/8-hour non-attainment area overlaps (scenarios) after the new 8-hour standard has been finalized and before the 1-hour standard is revoked. The paper discusses how conformity would be addressed in each of the scenarios and is intended to represent any possible combination of non-attainment areas. This discussion does not address issues currently being raised by some of the other subgroups regarding Areas of Influence (AOIs) and Areas of Violation (AOVs), and does not address conformity in transitional areas (TAs). Conformity in TAs is addressed in a separate discussion paper. Discussion was divided into the following time frames:

- *1yr grace period* (First year of 8-hour designation)
- *End of grace to budget* (End of 1yr grace period, but before 8 hour budgets receive adequacy determination or 8-hour SIP approval)
- *Budget overlap* (After adequacy determination or approval of 8-hour budget, but before removal of 1-hour standard)
- *1-hour attainment* (both 1-hour maintenance budgets and 8-hour budget exist)
- *8-hour attainment* (both 1-hour and 8 hr maintenance budgets exist)

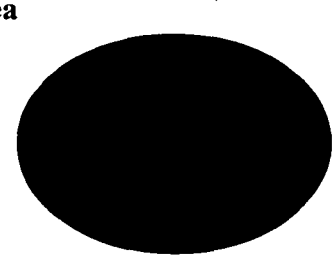
No discussion was completed on the last two time periods.

The assumption is made that 8-hour budgets will eventually be determined using MOBILE6 and will therefore incorporate new federal programs such as Tier 2. As such, an easy, direct comparison between the current 1-hour budget and a future 8-hour budget will probably not be possible, however states will be able to manipulate the budgets to make them comparable should they want.

Some discussion occurred regarding a possible EPA interpretation of the 10/27/00 guidance (regarding the1 yr grace period) as applying only to areas not previously included in a 1-hour non-attainment area, ie. that the 8-hour standard is just a revision. The general consensus was that to move forward the workgroup will assume that the 8-hour standard is a new standard, not a revision, and the grace period will apply to all designated 8-hour non-attainment areas.

The group agreed on the following:

SCENARIO 1: the existing 1-hour area is entirely surrounded by the new 8-hour area



1yr grace period - the 1-hour areas will continue to meet the 1-hour budgets. No test is required for the 8-hour area during the grace period (per EPA legislation signed 10/27/00). Failure to meet conformity in the 1-hour area will only affect 1-hour area, not the surrounding area included in the 8-hour area.

End of grace to budget – 1-hour areas meet 1-hour budgets, entire 8-hour area does emission reduction test (build/no build, or build<baseline). A failure of the 1-hour budget test affects only the 1-hour area, while a failure of the 8-hour emission reduction test would be a failure for the entire area.

Rationale:
The group discussed several options including requiring the emission reduction test only in those portions of the 8-hour area that are not part of the 1-hour area (the donut). The conclusion was that the only way to fully protect the health benefits within the 8-hour area, and to be fair to all communities included in the 8-hour area, is to require the entire area to undergo the 8-hour test. If only a portion of the 8-hour area underwent the test and failed, the entire area would fail for conformity and this would not be fair to the portion of the area not included in the test. For example, suppose the 8-hour area is the same as the 1-hour area with the addition of one county. If the 8-hour build/no-build test is only done for the area not in the one hour area rather than for the entire area, the build/no-build test would essentially be done only for the one county. If that county failed, the entire area would fail conformity, an unfair result that may spur the area to want to split apart and do conformity separately.

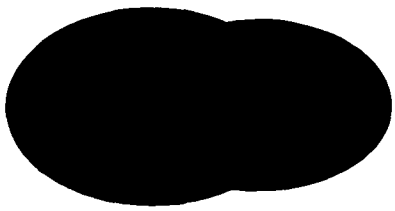
Doing the emission reduction test just in the area outside the 1-hour (the donut) might be more stringent <u>if</u> all the growth is in the donut. But this approach encourages sprawl by leaving the urban area out of the discussion, and encourages the outer ring to plan its transportation separately. In the long run, it is better to get all parts of the non-attainment area in a discussion early in the process.

Budget overlap – show compliance with both budgets in the area covered by each budget. However, a state should be allowed to make a demonstration that the 8-hour budget is more restrictive than the 1-hour budget (i.e. more controls, etc), in which case only the 8-hour budget test would be required. For areas required to do both tests, a failure in the 1-hour budget test affects only the 1-hour area, while a failure of the 8-hour budget test would be a failure for the entire area.

Rationale:
Some states may prefer to document in their SIPs that the 8-hour budget is more stringent for the entire area than the 1-hour is for just the 1-hour area. EPA should review the SIPS on a case-by-case basis and approve such an approach when warranted. Developing a direct comparison between the 1-hour to the 8-hour for areas with different boundaries will likely be a difficult, time consuming effort. The 1-hour budgets may not include programs such as NLEV, Tier 2, Heavy Duty Diesel standards, etc, which may be a part

of the 8-hour budgets. Therefore, while EPA should allow such a comparison, EPA should not require a comparison.

SCENARIO 2: the existing 1-hour area and the new 8-hour area have some portion overlapping, but have distinct areas as well



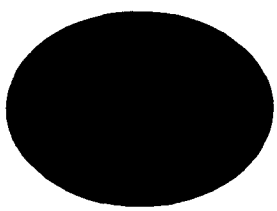
1yr grace period - the 1-hour area will continue to meet the 1-hour budget. No test is required for the 8-hour area during the grace period (per EPA legislation signed 10/27/00). Failure to meet conformity will only affect 1-hour area.

End of grace to budget - entire 1-hour area must meet 1-hour budget. Entire 8-hour area must meet emission reduction test. A failure in either the 1 or 8-hour areas is a failure for that entire area, including the overlap, even if the other area meets conformity.

Budget overlap – must do both 1-hour and 8-hour budget tests. If an area fails one test, but passes the other then the projects in the non-overlap area of the passing area can move forward. Projects in the overlap area which are within the other failed zone cannot proceed.

Rationale:
Similar to logic of scenario 1. In order to fully protect the public health in the 8-hour area, the entire area must be a part of the emission reduction test or 8-hour budget test, not just the area outside the 1-hour boundary.

SCENARIO 3: the 1-hour and 8-hour areas have identical geographical boundaries.



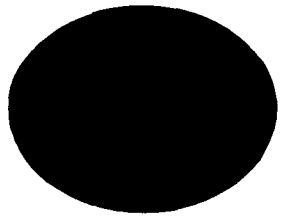
1yr grace period – the area will continue to test to the 1-hour budget.

End of grace to budget – the area will continue to test to the 1-hour budget. Because the area would already be demonstrating conformity with the budget test for the 1-hour standard, there is no additional benefit to public health in also doing the build/no-build test for the 8-hour standard because the build/no build test is generally an easier test to meet than a budget test.

Budget overlap – test to whichever budget is lower (either by actual numbers, i.e. kg/day, or by control requirements, as demonstrated in the SIP submittal). If there are internal divisions (i.e. multiple 1-hour non-attainment areas which are now incorporated into a single 8-hour area) then the budgets from the 1-hour areas are added together to get budget for the whole area for comparison to the 8-hour budget.

Rationale: In most areas with identical boundaries the SIP with the smaller budget (fewer kg/day) will be the most protective of health. However, a state may wish to show that control requirements under one or the other SIP are actually more restrictive and protective of health. If a state is able to demonstrate this satisfactorily then EPA should allow testing to the requested budget.

SCENARIO 4: the new 8-hour area is completely encircled by the existing 1-hour area



1yr grace period – 1-hour budget test

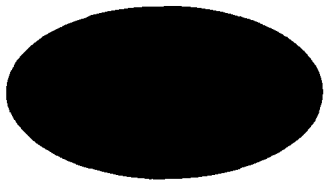
End of grace to budget – 1-hour area meet 1-hour budgets, 8-hour area does emission reduction test (build/no build, or build<baseline). A failure in the 1-hour budget test affects the whole 1-hour area, while a failure of the 8-hour emission reduction test would affect only the 8-hour area.

Budget overlap – must meet test for both budgets. However, a state should be allowed to make a demonstration that the 1-hour budget is more restrictive for the entire area than the 8-hour budget is for the smaller area (i.e. more controls, etc), in which case only the 1-hour budget test would be required. For areas required to do both tests, a failure of the 8-hour budget test affects only the 8-hour area, while a failure of the 1-hour budget test would be a failure for the entire area.

Rationale: Under current conformity rules the 1-hour area must continue to meet the 1-hour budget until the standard is revoked. In order to fully protect public health within the smaller 8-hour area, an 8-hour emission reduction test, or budget test once a budget is established, must also be done. The smaller 8-hour area is likely to represent denser population, and greater transportation related emissions, than in the 1-hour donut area. In

such an area of high growth and smaller boundaries even an emissions reduction test may be more difficult to meet than the budget test for the larger 1-hour area. Again, if a state wishes, and is able to demonstrate that the 1-hour budget is more protective for the whole area than the 8-hour budget is for that area, EPA should approve use of just the 1-hour budget test on a case-by-case basis.

SCENARIO 5: a new 8-hour area where no 1-hour area previously existed

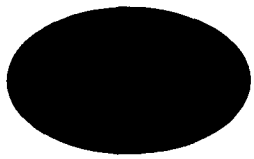


1yr grace period – no test required

End of grace to budget – emission reduction test

After Budget – budget test

SCENARIO 6: an existing 1-hour area that is in attainment with the new 8-hour standard



This area will continue to test to the 1-hour budget (or maintenance budget if the area was reclassified as 1-hour attainment) either until the end of the maintenance period, or until EPA revokes the 1-hour areas (if they do that)

revised 1/2/01

Discussion paper on the use of the VMT Screen as a Conformity Test for 8-hr Ozone Nonattainment Areas ***.....minor edits from Jan 4 version.....***

The concept of Transitional Nonattainment was developed to identify areas that have air quality that currently violates the proposed 8-hour ozone standard but are expected to attain and maintain the new standard due to emission reductions from other programs. These other emission reductions programs include reductions achieved through the Tier 2 and low sulfur gasoline (**T2/lsg**) rule, the NOx SIP Call, and other significant local or regional NOx emission reduction programs.

The VMT Screen Test described in the June, 1998 staff document is the least resource intensive test described for conformity. For many areas, emission reductions from the NOx SIP Call and the **T2/lsg** rule are predicted to be more than sufficient to attain and maintain the 8-hour ozone standard.

A recommendation to EPA is that the VMT Screen Conformity Test be retained as described in the July 1998 EPA staff paper. The VMT Screen Conformity Test could be used provided that the test shows conformity for both the Attainment year and the last year of the transportation plan.

A further recommendation to EPA is that Rural and Transitional Areas may have Safety Margins built in to the VMT Screen Test. If a Safety Margin is used in the VMT Screen Test then the same Safety Margin must be used to show conformity in the attainment year and to show conformity in the Last Year of the transportation plan. A VMT Screen Test that incorporates Safety Margins and an emissions factor adjustment that incorporates both the emission reductions from the **T2/lsg** rule and the growth in light duty truck emissions can be used if a SIP attainment demonstration shows that these mobile source emissions will not:

(i) cause or contribute to any new violation of any standard in any area;
(ii) increase the frequency or severity of any existing violation of any standard in any area; or
(iii) delay timely attainment of any standard or any required emission reductions or other milestones in any area.

Should a safety margin be used, it must be clearly identified in the SIP as a safety margin.

A final recommendation is that the VMT Screen Test be modified so that:

VMT(baseyear) >= (SIP VMT + Safety Margin)(attainment year) x EF(attainment year)/EF(baseyear)

This is to put a "cap" on the size of the safety margin. The working recommendation from the Conformity Subgroup is that 1999 will be the baseyear.

WORKING ASSUMPTIONS:

The EF (emissions factor) needs to be a weighted average emissions factor that reflects the market penetration of light trucks.

The VMT and emissions factors need to incorporate both the latest planning assumptions and use the latest MOBILE model.

The safety margin is to be established for the attainment year of the SIP and is to be consistent with the conformity rule's definition of a safety margin.

DRAFT: 20 December 2000.

GENERAL CONFORMITY.

Many federal facilities or facilities receiving substantial federal funds are subject to General Conformity if they are located in areas that are non-attainment for at least one criteria pollutant standard. These facilities include everything from National Parks to airports, to military bases and seaports. Under current rules general conformity provisions are only triggered if a change in operations causes an increase in pollution above a *de minimus* level. With long project horizons and little communication between local air pollution officials a facility may, over the course of several years, have a series of independent operation changes that cause a significant increase in the pollution associated with the facility. If the independent changes in operation are each very small there general conformity provisions are not tripped even though the end result may be a facility with significantly greater pollution than expected in the SIP.

Many facilities have a large number of permitted and non-permitted pollution sources that may be controlled (operated) by a number of different entities. In the SIP, each of these independent activities may have separate inventory lines. Growth rates assumed when the SIP was approved may have been greatly exceeded without any violation of an existing air pollution rule.

EPA should strongly encourage local air pollution authorities to engage in a consultative process with facilities subject to the provisions of general conformity. The outcome of the consultative process is expected to be a "budget" identified for each facility subject to general conformity.

EPA should strongly encourage federal agencies subject to general conformity to cooperate in consultative processes with local air pollution authorities if requested to do so.

EPA should approve SIPs with budgets identified for facilities subject to general conformity and that facilities that maintain emissions below their identified budgets be deemed in compliance with all general conformity provisions. Facilities subject to general conformity will be encouraged to adopt practices that reduce pollution from all sources that are part of the identified budget and that early reductions from all contributing sources be considered as "offsets" against any future increases in emissions due to growth or operational changes.

Early Reduction Strategies - Various Benchmarking Issues

I. Individual Sources – Baseline Protection

Issue: Sources should not be "punished" for early actions to reduce emissions.

Discussion: In the selection of a single baseline year, sources that have implemented controls will not be credited for the actions taken prior to the baseline year. The source should be allowed to get credit for any early measure that is beyond the current SIP or applicable federal requirement (whichever is more stringent).

In addition, the baseline year could represent some sort of anomaly in a source's operation and not be representative of "normal" operation. These sources should be able to use an average of multiple years (say 3) to determine a representative baseline.

This probably isn't an issue in the case of an emission rate limitation program (such as NOx RACT). If a source is required to meet a new emission rate, there is no inherent "punishment" for reducing emissions to or below the new limitation early.

Where this could become an issue is under an emission budget (or cap and trade program) such as the NOx SIP Call's NOx Budget Program. In this case, a source could receive a reduced allocation because of action taken to lower emissions prior to the baseline period. A source's operation history is also important under this scenario. If a source underwent some sort of "exceptional circumstance" during the baseline period (such as a forced outage or operational turndown), it could receive a lower than expected allocation as a result.

We can avoid "punishing" sources under each of these scenarios with a little bit of forethought. For the early application of control, we could either look at some pre-control period to establish an appropriate baseline with a regulatory emission limitation as the base. We would need to investigate whether the reduced emissions at this source were being used to compensate for less control at another source (i. e., RACT averaging plan). If that was the case, only those reductions in excess of the RACT averaging plan could be credited.

For "exceptional circumstances," sources would need to document that indeed there were conditions that caused this decreased activity level. Once this documentation was accepted, then an appropriate baseline period would need to be chosen. To avoid picking the most advantageous year, we should use an average of a number of representative years in the recent past as the baseline period.

It should be noted that adjusting the baseline for a particular source does not necessarily translate into an adjustment of a company or State budget total. Especially for electricity generation, the availability a single source will change the operation of a facility or even a series of facilities, but will not change the overall operational or emissions profile of a company or State. Therefore, the designation of an "exceptional circumstance" needs to

keep in mind the operation of connected or related sources. In addition, it also should be noted that "exceptional circumstances" always result in a net increase in your baseline total.

II. State Implementation Plan – Baseline Protection

Issue: State/Local agencies should not be "punished" for early actions to reduce emissions.

Discussion: Under the reasonable further progress requirements of the Clean Air Act, we are to document and demonstrate progress toward attainment. An important aspect of that documentation is the establishment of baseline inventory from which to demonstrate progress. One of the problems with the 1990 Amendments was the establishment of a set percentage for reasonable further progress and the requirement that NO reductions implemented prior to 1990 could be credited. Therefore, jurisdictions with control programs that went into effect prior to 1990 could not receive credit. This was exacerbated by the phased SIP process that had State/Local agencies seeking the minimum reasonable further progress reductions prior to knowing the emission levels for attainment. It also created a situation where State/Local agencies that did not implement programs received credit towards reasonable further progress for the same programs that other jurisdictions could not receive credit because the controls were implemented prior to 1990. This occurred in multi-state nonattainment areas designated by the same monitor.

The concept of reasonable further progress is an excellent air quality planning tool. It requires jurisdictions to phase-in controls (as expeditiously as possible) so that all measures are not deferred until the attainment date. Presumably under this concept, State/Local agencies are able to distribute their workload over the planning period and measure actual monitored air quality progress and adjust their SIPs accordingly. It also assumes interim improvements in air quality which will benefit the public well-being. Eliminating the set percentage from the baseline methodology to determine reasonable further progress will level the playing field and remove the disincentive for early controls.

The proper way to plan for progress towards attainment is to develop a baseline inventory and a modeled attainment demonstration. The modeled attainment demonstration will have a future year inventory used to determine attainment. This attainment inventory should be used to measure progress. Reasonable further progress would be the increments used during the interim to measure progress. Rather than a set percentage of the baseline inventory, State/Local agencies would phase-in a set percentage of the difference between the baseline and the attainment inventory (e.g., 25 % over four periods or 33.3 % over 3 periods). Under this approach no one gets "punished" for early reductions since ultimately each area has to obtain all of the reductions needed for attainment.

There are problems with this approach. It assumes that one knows up front the level of emission reductions needed for attainment, that State/Local agencies can identify all of the measures needed for attainment and can develop a credible modeled attainment demonstration with those measures. Since this is an unlikely scenario, several iterations of the attainment and reasonable further progress demonstration could be needed. This could require additional planning resources to complete these "mid-course reviews." However, it could be said that this is not much different than what we do today.

Another problem (obviously not only for this issue) is the local nature of the planning efforts when dealing with a regional, national or even global problem. The benchmarking efforts discussed here work well in the limited setting of a nonattainment area, but less well or not at all in a regional context. Given the very nature of 8-hour ozone nonattainment, we need to begin thinking in terms of larger (for the lack of a better term) areas of "influence" and not just metropolitan areas. We will need to coordinate the benchmarking efforts with the regional planning efforts that will be needed to deal with 8-hour ozone nonattainment. Below is further discussion on this issue.

Following is a discussion of the pros and cons of various inventory years:

1990

Pro: Using 1990 as the benchmark allows State and Local governments to take full credit for those programs implemented to address one-hour ozone nonattainment. This would provide a level playing field for States and Local governements that have had to implement a wide range of controls since 1990. These inventories to the extent they are complete are final and have been reviewed by all interested parties.

Con: The 1990 inventories are are 10 years old and do not always represent the latest emission estimation procedures. In addition, gaps exist in areas that did not compile 1990 inventories because they were attaining the one-hour ozone NAAQS. Although these gaps were filled in the NET inventory and modeling inventories, they generally are not of the quality need for benchmarking.

1996

Pro: The 1996 inventory effort for ozone is nearly complete and includes improved emission estimation techniques (i.e., Title IV CEMS and EIIP methodologies).

Con: There will still be some data gaps from areas that did not perform ozone inventories. Control programs to address Clean Air Act mandates (e.g., RACT) that States and Local governments have implemented will be accounted for in the 1996 inventory and unless these programs can be effectively backed out of the 1996 benchmark inventory, it will be impossible to credit these reductions. As an alternative to backing out CAA mandated programs, these programs could be ineligible for use as early reductions.

1999

Pro: The 1999 inventory should be much more complete in terms of both pollutant and geographic coverage.

Con: As with using the 1996 inventory as a benchmark, it will be difficult to credit control programs implemented to address one-hour ozone and thus creating an unlevel playing field for 8-hour ozone. The 1999 inventory will not be ready in its final format until June 1, 2003.

2002

Pro: The 2002 inventory will be complete in terms of pollutant and geographic coverage.

Con: As with the 1996/1999 inventories, it will be difficult to credit control programs implemented to address one-hour ozone and thus creating an unlevel playing field for 8-hour ozone. The 2002 inventory will not be ready in its final format until 2005.

III. Early Reductions in an Emissions Budget Program

Issue: Crediting early reductions phase-in or delay achievement of an emissions cap because sources use up banked early reductions prior to achieving the emissions cap.

Discussion: The benefit of early reductions is that some reductions occur prior to the implementation of the cap. For new programs that will not achieve any environmental benefit until the cap is implemented, incentives for early reductions may be appropriate, if the environmental benefit of the early reductions is judged to outweigh the disbenefit of delayed achievement of the cap. However, cap and trade programs (i.e., EPA's Acid Rain SO_2 Allowance Program and OTC's NOx Budget Program) already exist and the EPA NOx Budget Program will likely begin in 2004. Those programs could merely be modified to address the 8-hr ozone and the fine PM problems. The OTC's NOx Budget Program or EPA's NOx Budget Program could be expanded to a national seasonal program. Banked unused NOx allowances under those programs would be considered "early reductions". Thus, the issue is more of a program transition issue than an early reduction issue.

Caps (emission budgets) should be set based on reductions from a historical (not future projected) baseline, in order to ensure "real" reductions. A 1990 baseline (as used by the OTC in its NOx Budget Program) coinciding with the date of the Clean Air Act Amendments could be used, and reductions made in the OTR since 1990 would be accounted for. Admittedly, more current data may be more accurate than 1990 data, but the improved accuracy may not outweigh the equity issue of starting from a common pre-reduction date. The EPA NOx Budget Program cap is based on a projected 2007 baseline using the greater of the actual 1995 or 1996 heat inputs and growth projections. Since these budgets are not based on actual base year emissions, they are not appropriate for use in benchmarking early reductions.

A sub-cap or limit on the amount of early reductions, similar to the Compliance Supplement Pool concept used by EPA in its NOx SIP Call Program, could be applied to avoid an over-abundance of early reductions and a prolonged phase-in or delay of in achieving cap.

IV. Benchmarking Areas Contributing to Nonattainment

Issue: Areas outside the traditional definition of a nonattainment area will be required to develop control strategies to address transport (i.e., NOx SIP Call). Benchmarking to credit early reductions will be needed to allow this.

Discussion: As discussed above, it has become necessary to expand our current SIP procedures to include areas that "influence" areas that monitor nonattainment. This includes establishing a baseline, developing control strategies and documenting progress. Reasonable further progress requirements should be extended to include areas of influence (AOI). AOIs will have emission reduction requirements tied to downwind nonattainment areas. They will need to develop reasonable further progress plans that demonstrate and document how they will meet these requirements.

The difficulty here is finding agreement on what is considered "influence." As we learned in the OTAG process, this can be a very contentious issue with widely differing opinions of what is considered influence. While it is unlikely that this issue can be solved in the near future, the multi-state regional technical centers established to address air pollution transport and common air quality problems are assessing air quality monitoring data and modeling and should start the discussion on what constitutes influence. These discussions should be extended to between the centers. In the absence of agreement, the Act provides mechanisms for addressing influence under sections 110 and 126. While these may be imperfect, they provide the only statutory mechanisms for address inter-state influence.

Assuming that an AOI can be agreed upon, it is important for these AOIs establish a baseline emission inventory. Currently, there are no requirements to inventory outside of nonattainment areas. The proposed consolidated emissions reporting rule (CERR) will expand inventory requirements nationwide. The problem here is one of timing. Though many states are expecting to report statewide 1999 inventories by 2002, if the CERR is finalized in 2001 many states would expect that the first year to report inventory information would be 2002. The inherent delay in the collecting, compiling and reporting inventories would not make this information available until 2005. This timing will make benchmarking a source or AOI more difficult.

IV. Summary

It is largely agreed that sources and State/Local agencies should receive credit for measures implemented prior to the date of 8-hour ozone nonattainment designation. To

achieve this, a source or area must establish a baseline from which to determine the effect of the control measure and allow the source or State/Local agency to credit that measure.

For individual source benchmarking, the baseline must be representative of normal operation and for some pre-control (pre-baseline) period. The credit given must be in excess of any applicable permit, SIP or federal requirement.

For SIP benchmarking, State/Local agencies must set a baseline year from which to determine reasonable further progress. The earlier the baseline year is set the more measures that State/Local agencies can take credit for. However, there is a trade-off between using older inventories that may not be representative of current conditions and newer inventories that limit the credit that can be taken for the measures implemented prior to the designation date.

Readily available alternatives to the 1990 baseline are the 1996 or 1999 inventories. Guidance on the implementation of the 8-hour ozone and fine PM NAAQS has identified 1999 as the appropriate base year for planning purposes with 1996 as an acceptable alternative.

Early reductions in an emissions budget program can be desirable because they can expedite improvement to air quality. State/Local agencies must weigh the advantages of encouraging early reductions against the disadvantages of delayed achievement of the program goals. A limit can be placed on the number of early reductions that a State/Local agency can credit (ala the NOx SIP Call compliance supplement pool) to limit the delayed achievement of the program goals. The baseline from which early reductions are credited should be based on actual historical emissions and not a projected base year.

Areas outside the areas monitoring nonattainment influence air quality in the nonattainment areas. Benchmarking in AOIs will be important since these areas will likely be expected to their measure progress in the reducing emissions that impact the areas monitoring nonattainment.

The basic premise of applying reasonable further progress requirements only to AOVs should be abandoned. A recommendation should be developed for AOIs, not AOVs. Since essentially all areas impact (i.e., influence) some other area and only the extent of the impact varies (the "domino effect"), the entire United States could be considered one giant AOI. National cap and trade programs for key ozone and fine particulate matter precursors (NOx and SO_2) should be implemented to address monitored air quality violations, and the caps should be periodically adjusted (i.e., decline) based on RFP evaluations based on ambient air monitoring results. Other local programs (e.g., VOC controls and additional NOx controls) should be implemented as needed to address hot spots in large urban areas.

draft 11/9/00

STAPPA/ALAPCO WORK GROUP ON IMPLEMENTATION OF 8-HR OZONE NAAQS
SUBGROUP: Early Reductions

SUGGESTED FORMAT FOR SUMMARIZING OPTIONS ON ISSUES
(attach any more detailed papers (e.g., with background and further discussion)

#	ISSUE/OPTION	PRO	CON	COMMENT
23.	Issue: Sources and/or State/Local agencies should not be "punished" for early actions to reduce emissions			
	Option 1: 1990 Baseline (or alternative, more representative 2 consecutive year post-1990 average)	Using 1990 as the benchmark allows State and Local governments to take full credit for those programs implemented to address one-hour ozone nonattainment. This would provide a level playing field for States and Local governments that have had to implement a wide range of controls since 1990. These inventories to the extent they are complete are final and have been reviewed by all interested parties.	The 1990 inventories are 10 years old and do not always represent the latest emission estimation procedures. In addition, gaps exist in areas that did not compile 1990 inventories because they were attaining the one-hour ozone NAAQS. Although these gaps were filled in the NET inventory and modeling inventories, they generally are not of the quality need for benchmarking.	Provides the greatest amount of baseline protection.

	Option 2: 1996 Baseline (or alternative, more representative 2 consecutive year post-1990 average)	The 1996 inventory effort for ozone is nearly complete and includes improved emission estimation techniques (i.e., Title IV CEMS and EIIP methodologies).	There will still be some data gaps from areas that did not perform ozone inventories. Control programs to address Clean Air Act mandates (e.g., RACT) that States and Local governments have implemented will be accounted for in the 1996 inventory and unless these programs can be effectively backed out of the 1996 benchmark inventory, it will be impossible to credit these reductions. As an alternative to backing out CAA mandated programs, these programs could be ineligible for use as early reductions.	Provides a moderate amount of baseline protection.
	Option 3: 1999 Baseline (or alternative, more representative 2 consecutive year post-1990 average)	The 1999 inventory should be much more complete in terms of both pollutant and geographic coverage.	As with using the 1996 inventory as a benchmark, it will be difficult to credit control programs implemented to address one-hour ozone and thus creating an unlevel playing field for 8-hour ozone. The 1999 inventory will not be ready in its final format until June 1, 2003.	Provides the least amount of baseline protection.

SUBGROUP 4, ISSUE 24, ATTAINMENT YEAR FOR EARLY SIPS

Date: November 8, 2000

Status: Draft #3.

Introduction

An earlier attainment year could lead to earlier reductions, which could produce earlier attainment, or at least ozone concentrations closer to attainment. To evaluate whether or not this is applicable or beneficial to their areas, states will need to consider at least the two following questions.

1. Should an area with an early attainment date be given an early or later designation?

--This may not be an issue, given the legal status of the standard and of designations. If EPA does have this flexibility, what is the real amount of time difference between early and "regular" designation dates? To consider this option, the time difference would need to be large enough to make it matter and have some real effect.

-EPA will need to be clear on what this range of time might be, if it exists.

--Earlier designation could help some areas that need it. Some states have legal restrictions on their ability to adopt rules beyond federal requirements. An early designation by EPA could provide an incentive by creating the ability needed in those states to adopt early control measures to meet the federal air quality standard requirements. (This would vary across the states.) For other states with broader authority to adopt measures, this would not help, other than to provide the regulatory support for proposed control measures.

-This option will vary significantly from state to state, so EPA should closely coordinate with individual states.

--Earlier designation triggers earlier implementation of controls like NSR, conformity, and RFP, which could be a disincentive for some areas, unless some flexibility could be provided. It could be an incentive for other areas in which earlier attainment requires earlier implementation of those types of control measures.

--Congress has delayed conformity until one year after designations, which creates a window of time for some areas that may be able to attain with stationary source or regional controls. A later designation date, delaying conformity even later, could provide flexibility in those areas for which transportation emissions are not as critical.

-EPA should work to identify such possible areas.

--EPA modeling indicates that some areas may attain as a result of the NOX SIP call reductions alone, due by 2004. For these areas, which could have an early attainment date, an early designation would likely not be an incentive without flexibility on other controls such as NSR and conformity. Without this added flexibility, a normal or even later designation date would be more appropriate, though some additional state commitment would be needed to delay designation. A later designation could be appropriate for areas with less impact from transportation or other local emission and more from regional emissions.

-EPA should review its regional NOX modeling to identify those areas that could benefit from this approach.

2. Is an early attainment date really an incentive or actually a disincentive to early reductions?

--EPA's draft implementation guidance proposed SIP submittals three years from designation, controls in place two years later, and attainment demonstrated two years after that (attainment dates no later than seven years from designation).

--Early attainment, then, would accelerate this process. This could be with earlier SIP submittals, earlier implementation of control measures, and earlier actual attainment.

--Early SIP submittal would carry with it consequences of failure to submit the SIP on time or to implement certain elements of the SIP. Either of these failures could lead to sanctions earlier than could be required than the regular SIP schedule. This could be a disincentive for states.

--Areas that may be able to attain as a result of the NOX SIP call alone will decide whether an earlier attainment date (2004) is really appropriate based on the flexibility provided for NSR and conformity. Without that flexibility there would be little incentive for an earlier attainment date.

--Would the early SIP need to have the same full modeled demonstration requirements? Could areas that are close enough to the standard to consider this option be able to use a different demonstration method? Areas closer to attainment could possibly use existing modeling, screening, or rollback models as attainment demonstrations. This would allow the state and EPA to focus time and other resources on other areas that may have more significant air quality problems that require more detailed modeling. This could be an incentive for some areas.

-EPA should work to consider what tools and techniques are available for these areas.

--Depending on what base year is used, this could be more or less of an incentive. (See the benchmarking issue)

--In the end, this is an incentive only if the flexibility EPA may be able to provide will have strong positive benefits for the area, which can lead to the decisions to seek early reductions. This will vary from area to area.

draft 12/11/00

STAPPA/ALAPCO WORK GROUP ON IMPLEMENTATION OF 8-HR OZONE NAAQS
SUBGROUP: Early Reductions

SUGGESTED FORMAT FOR SUMMARIZING OPTIONS ON ISSUES
(attach any more detailed papers (e.g., with background and further discussion)

#	ISSUE/OPTION	PRO	CON	COMMENT
24.	Issue: Should an area with an early attainment date be given an early or later designation?			
	Option 1: Designate earlier	This could help those states with statutory restrictions on their ability to adopt rules beyond federal requirements. For other states, this could provide a stimulus, or regulatory support for proposed control measure needed to attain.	Earlier NSR, conformity, and other nonattainment area requirements would be required. This could hurt areas affected by the NOx SIP Call reductions, unless early designation also provided regulatory flexibility.	Timing of designation would be important. Close coordination with the state would be needed. The time difference (how much earlier than "normal") would need to be large enough to have some real effect. More EPA data analysis on NOx SIP Call effects is needed.

Option 2: Designate later	This could give areas the ability to delay conformity requirements if they are not as critical as other control measures. This is especially true given the one year conformity delay from designation already provided by Congress. This could help areas affected by the NOx SIP Call reductions, , unless early designation provided more regulatory flexibility.	This could hurt areas which need designation to act	This may be more appropriate for areas with less impact from transportation or other local control measures and more from regional emissions.
Issue: Is an early attainment date really an incentive or actually a disincentive to early reductions?			
Option 1: Incentive	Early attainment means cleaner air sooner. If sufficient EPA flexibility is provided, a more cost effective solution could be implemented.		This is an incentive only if EPA provides flexibility with some positive benefits for the area.
Option 2: Disincentive		This could led to sanctions earlier if there are problems with an early SIP submittal. If a full modeled demonstration is required, there may be insufficient time to plan. Without EPA flexibility on nonattainment area requirements, there would be little incentive, including areas affected by NOx transport.	The base year chosen could indicate whether this is an incentive or a disincentive. EPA input is needed on possible alternative tools and techniques.

INCENTIVES FOR EARLY REDUCTIONS

This is a compilation of the papers on incentives for early reductions that were drafted based on type of area affected. The original three papers discussed incentives for areas that are in attainment, areas that are borderline nonattainment and areas that are nonattainment but are impacted by transport. Since several of the incentives mentioned were very similar or identical for one or more of the types of areas, it was decided to compile all three papers into one. This compilation is presented in the format of a listing of those incentives that could apply to more than one type area followed by those that seem to be unique to the particular type of area.

There are also different levels of existing ozone control planning in the potentially affected areas. Those that have existing ozone control programs and those that do not.

Areas that have existing ozone control programs. Areas that have already implemented ozone control measures to meet the 1-hour ozone standard should already have good information regarding sources of ozone pre-cursors, and potential control measures. These areas may have contingency measures that could be implemented as a proactive measure. National strategies, such as Tier II controls for automobiles may be providing additional reductions in the future. Incentives to implement episodic controls, voluntary measures and public education in addition to contingency measures could be effective in these areas to avoid nonattainment designation.

Areas without existing ozone control programs. Areas that are facing nonattainment designation for the first time under the 8-hour standard may be lacking basic information that will be needed to understand the sources of ozone precursors in the area, and the most effective strategies to reduce emissions. Detailed emission inventories are needed, as well as meteorological data to characterize the area. This is especially an issue in areas with complex terrain. Once the inventory is developed, complex photochemical modeling is needed to understand how ozone is formed and transported in the area. Regional modeling may also be necessary to address issues of long-range transport. Incentives for early planning and the development of basic technical information will be effective in these areas, especially if opportunities are still available to develop proactive control measures that will help the areas avoid nonattainment designation.

Since it is assumed that those areas that are currently nonattainment for the 1-hour standard already have requirements for emission reductions in their existing ozone control programs and that incentives for early reductions would likely have little impact, they are not specifically included in the discussion. However, to the extent any of the incentives discussed would be beneficial in such areas they should be considered for implementation by EPA.

INCENTIVES COMMON TO MORE THAN ONE AREA TYPE

Funding: Redirecting funding to areas that are not yet nonattainment will help prevent larger expenditures in the future by alleviating the need for such designations through improved air quality and public health protection before otherwise required by nonattainment designations. Such redirected funding could provide incentives for the following:

- Emission inventories – EPA needs to provide Section 105 funding to help areas develop complete emission inventories that will clearly identify the sources of air pollution. Many borderline attainment areas don't have accurate emissions inventory information to determine what source categories are contributing to air pollution. Accurate information is necessary to develop effective control strategies.
- Modeling – EPA needs to provide Section 105 funds to areas to develop appropriate air quality models to allow analysis of the effectiveness of possible control strategies. These models would not be as detailed as the models required for nonattainment areas, but would be sufficiently robust to allow an effective evaluation of the various strategies.
- Transportation controls – Provide assistance to areas to control emissions from mobile sources.
    - Cleaner cars and fuels – Encourage attainment areas to become involved in discussions about cleaner car and fuel technologies. Support areas in opting in to cleaner technology.
    - Transportation planning – Provide funding to enhance planning; CMAQ funds need to be available to attainment areas. Provide examples of effective cooperative agreements between air quality agencies and transportation planning agencies so agencies can adapt those samples to their own unique circumstance. Provide funding for development of cooperative agreements.
- Stationary source controls – Develop list of possible episodic and ongoing controls to voluntarily reduce emissions from stationary sources. Develop appropriate publicity to acknowledge such voluntary efforts.
- Area source controls – Develop list of possible episodic and ongoing controls to voluntarily reduce emissions from area sources. Develop appropriate publicity to acknowledge such voluntary efforts.
- Energy efficiency – Support approaches which link energy use and air quality. Encourage air quality agencies to work with the energy office counterparts to explore and implement approaches that improve energy efficiency and reduce air pollution. Such strategies could include tree planting to reduce urban heat island effects and energy efficient buildings and homes.
- Information availability – Establish a resource guide to identify available resources and strategies. (If such a guide is already available, make it more widely known and distributed.) Identify strategies that have been effectively used in other areas trying to maintain an attainment status. The strategies should include technical information about specific control strategies and policy information about the approaches and organizational tools that have worked well.
- Education and outreach – Provide funding for the development of effective education and outreach programs to provide information to the public about steps they can take to reduce air pollution. Many areas have effectively used trip reduction programs, ozone alert days and similar strategies to get the public involved in air quality improvements.

- Establish community support – Many areas are using stakeholder groups to address air quality issues. Such stakeholder groups should be supported through a variety of tools, including financial support, technical support and a sharing of information of what stakeholder approaches have worked (or not worked) in other areas.

- Voluntary Measures and Pollution Prevention. EPA could also develop templates, and provide a menu of ideas for voluntary measures that sources could implement to reduce ozone pre-cursors. *However, provisions must be made to ensure SIP credit for any early voluntary emission reduction measures or there will be a reluctance to implement them for fear the measures will be needed if the area gets designated nonattainment in the future.*

Flexible Attainment Region (FAR) - allow use of a FAR type enforceable agreement with EPA, the area, state, and Tribes, if appropriate, for areas that do not have monitoring data indicating a violation of the standard with conditions requiring early reductions (or other early air quality improvement activities such as emissions inventory development, modeling, control strategy development, etc.) that are appropriate and meaningful for the specific areas. This approach has been used in Region 6 with some success as applied to areas trying to maintain attainment of the 1-hour standard.

(Note: The next three incentives (Delay Designations, Grace Period, and Trigger Maintenance Plans) all contain elements that could be implemented through a FAR type agreement or could be implemented individually)

Delay Designations - Slow down the designation process for new standards, instead focusing initial efforts on building the technical support to understand what is causing the problem. This could be accomplished by requiring emission inventories by a specific date, and providing national support (regional modeling centers, training, funding for new personnel, etc.) for developing photochemical models in areas with high ozone levels, also by a specific date. Delaying designations under this scenario would not delay implementation of control measures because the technical basis is needed in all areas. Once the technical work has been completed, designations could occur. The results of the modeling could be used to help classify areas, and also to identify areas that will achieve attainment based on national control measures that are already in place (such as Tier II standards). Delaying designations would provide time for areas that are close to the standard to take proactive measures and possibly avoid nonattainment designation.

Grace Period - At the time of initial designations provide a grace period for borderline areas that are actively developing and implementing proactive measures. Criteria could be established to identify what processes would need to be in effect in these areas.

(1) Cooperative planning with the local MPO.
(2) Implementation of proactive measures.
(3) Development of emission inventories and modeling demonstrations
(4) Commitment to a schedule of actions that will be taken to ensure that ozone levels will be decreasing over time.

Trigger Maintenance Plans - Allow areas with existing maintenance plans that were developed for the 1-hour standard to trigger contingency measures, and therefore avoid nonattainment status if those measures are able to bring the ar