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

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

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 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,

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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.

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 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.

For further information, contact:
David Solomon
Integrated Implementation Group, ITPID/OAQPS (MD-12)
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711
(919) 541-5375