

US EPA ARCHIVE DOCUMENT



April 22, 2002

Connecticut The Honorable Jeffrey R. Holmstead
Assistant Administrator
Office of Air and Radiation
Delaware U.S. Environmental Protection Agency (6101A)
Ariel Rios Building
District of Columbia 1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Maine Dear Administrator Holmstead:

Maryland I am pleased to present you with a proposal for implementing the eight-hour ozone standard. As per our discussions at the February 26, 2002, Ozone Transport Commission (OTC) meeting in Baltimore, many of the OTC States are concerned that the U.S. Environmental Protection Agency (EPA) has fallen behind in its schedule to implement the eight-hour ozone standard. While this was largely due to legal challenges, other delays have continued to plague EPA's progress. Timely implementation of the more protective, eight-hour ozone standard must be a national priority. Any delay in formalizing the requisite control requirements for the eight-hour standard postpones public health protection. As was promised at the OTC Winter Meeting, a States' proposal has been developed for your review.

New York The attached proposal is supported by the following jurisdictions: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Attachment 1 contains a set of principles on which the proposal is based. We believe that, above all else, expeditious implementation and attainment of the eight-hour ozone standard is imperative, in order to protect public health. 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. All affected areas must be accountable for their emissions contributions, and be prepared to do their fair share to address them, with appropriate degrees of flexibility. The Administration must establish a strong and protective national implementation process -- including effective national controls -- that will enable all areas to attain the eight-hour standard as expeditiously as possible.

Bruce S. Carhart
Executive Director

444 N. Capitol St. NW
Suite 638
Washington, DC 20001
(202) 508-3840
FAX (202) 508-3841
e-mail: ozone@sso.org

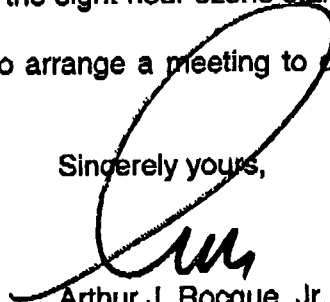
The proposal, contained in Attachment 2, delineates mechanisms for EPA to address ozone transport issues up front, prior to States submitting attainment plans, rather than retrospectively. We have drawn from sections of the Clean Air Act that require EPA to consider the effects of transport in

non-attainment area designations, classifications, and the State Implementation Plan (SIP) approval processes.

Addressing ozone transport in the implementation of the eight-hour ozone standard is critical. Notwithstanding legal challenges to and delays in implementing the NOx SIP Call and the Section 126 Petitions, States in the Northeast and Mid-Atlantic region have one-hour ozone SIPs in place. We have been actively pursuing and implementing additional emission reduction programs to meet and maintain the one-hour ozone standard and make progress toward the eight-hour standard. Meanwhile, many areas outside of the Ozone Transport Region (OTR) have delayed implementing the NOx SIP Call and the 126 Petition; this has caused challenges to OTR States, as ozone transport from upwind areas continues to hinder our efforts to achieve healthful air. We do not want a repeat of the drawn-out processes of the past. Instead, we want to take the lessons learned over the past 12 years and improve upon existing programs and mechanisms as we move forward to implement the eight-hour ozone standard.

A member of my staff will be calling you to arrange a meeting to discuss this proposal in detail. I expect our dialogue to be fruitful.

Sincerely yours,



Arthur J. Rocque, Jr.
Chair

AJR:BC:emw
Attachments

cc: All 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

ATTACHMENT 1 PRINCIPLES FOR IMPLEMENTING THE EIGHT-HOUR OZONE STANDARD

Given that:

1. Exposure to ground-level ozone can cause lung inflammation and irreversible lung damage, and aggravate 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 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.
2. Data indicating that adverse effects result from exposures at lower levels and for longer periods of time than the one-hour ozone standard prompted the U.S. Environmental Protection Agency (EPA), during its mandated review of the National Ambient Air Quality Standards (NAAQS), to set a more robust and stringent eight-hour ozone standard.
3. The state of the science on ozone transport has improved dramatically over the past ten years. The most current scientific knowledge has been garnered from efforts such as the Ozone Transport Assessment Group (OTAG, 1995-1997), EPA's Regional NOx SIP Call (1997), the Northeast States for Coordinated Air Use Management (NESCAUM) report on the Long Range Transport of Ozone (1997), and the North American Research Strategy for Tropospheric Ozone (NARSTO-NE-OPS, 1998).
4. The Clean Air Act requires that EPA consider the contribution to downwind areas when making nonattainment designations and findings on State Implementation Plans (SIPs).
5. A mix of local, regional, and national emission reduction measures are needed in order for States to provide healthful air to its citizenry.
6. States in the Northeast and Mid-Atlantic have adopted a suite of VOC and NOx control measures to address the one-hour ozone problem locally and regionally, including the NOx SIP Call, which will be implemented in the Ozone Transport Region by May 2003.
7. It has been and remains challenging for many states to attain the one-hour standard, even considering implementation of EPA's NOx SIP Call and upcoming mobile source programs. Many, if not most, States in the Northeast and Mid-Atlantic region will not be able to attain the eight-hour standard unless substantial emission reductions in upwind areas are achieved.

OTC believes that the following principles should guide implementation of the eight-hour ozone standard:

1. **Expeditious Implementation to Protect Public Health**

- Classification and implementation for the eight-hour ozone standard must be developed to ensure attainment as expeditiously as possible, so that public health protection is not delayed.
- For public health to be sufficiently protected, designations and classifications under the eight-hour ozone standard must be made as expeditiously as possible, so that implementation of the eight-hour standard can proceed.

- It is beneficial and efficient to harmonize the controls necessary to attain the eight-hour ozone standard with other air pollutants (e.g., PM-fine). However, harmonization must not result in any postponement of any criteria pollutant control programs, even if there are unforeseen delays. Implementation of existing, promulgated, or planned emission reduction programs to address eight-hour ozone problems cannot be stalled due to either later statutory requirements for or delays in other programs.
- National and regional measures, such as multi-pollutant emission cap programs and proposals, should provide real and substantial emission reductions to attain the National Ambient Air Quality Standards as expeditiously as possible.

2. Accountability and Fair Share

- Areas that violate the eight-hour ozone standard must be held accountable for their local emissions that contribute to unhealthy air.
- Areas that contribute to unhealthy air quality in downwind areas must be held accountable for those contributions.
- All areas that violate the eight-hour ozone standard or contribute to unhealthy air quality must show reasonable further progress on a regular basis (i.e., every three years) in cleaning the air.
- All areas must ensure that they will not contribute to deterioration of air quality into the future.
- Contributing source sectors (i.e., stationary, area, and mobile sources) in areas contributing to downwind nonattainment should be controlled to levels that address those contributions.
- States must consider the diverse sources that contribute to unhealthy air. The burden to reduce contributions to unhealthy air should not fall solely on one source sector, nor should there be a mandate to target all source sectors in a uniform fashion.
- In order to ensure timely public health protection, EPA must establish formal mechanisms that ensure accountability is incorporated into eight-hour standard implementation up front; ozone transport and contribution issues must be addressed before State Implementation Plans are approved.
- To effectively reduce ozone levels and address ozone transport, EPA's eight-hour implementation policies must be consistent with the current scientific knowledge.

3. Effective National and Regional Controls

- Strong and timely national and regional control measures addressing multiple pollutants should be required, notwithstanding an area's designation. Such controls will promote healthful air quality, assist new areas in maintaining healthful air quality, and ensure adequate reductions in emissions transported downwind at the lowest cost to upwind areas.
- Strong and timely national and regional "base level" controls are necessary. These controls need to be expeditious and achieve greater reductions than are currently required or planned for in the NOx SIP Call, the proposed Clear Skies Initiative, and the Acid Rain Program.

- Additional reductions from multiple source sectors are needed to ensure healthful air quality; therefore, national and regional controls must be pursued beyond those targeted at the electric generating sector.
- To be effective in protecting public health, any national and regional measures, such as multi-pollutant emission cap programs, must be stringent enough to allow all areas meet the standard.
- National and regional controls should be effective enough in addressing upwind contributions so that they preclude the need for States to petition EPA under Section 126 of the Clean Air Act.

4. Flexibility

- After establishing accountability with respect to basic control requirements to address the eight-hour ozone standard, areas that need additional, local controls must have the flexibility to: (1) assess how best to address their contributions from source sectors, taking into consideration criteria such as source density and high volume individual sources; and (2) choose how they will achieve reductions, within the context of their SIPs. Such controls must achieve equal if not greater environmental protection than those otherwise prescribed.
- States must be allowed to develop and implement innovative control measures.
- Flexibility within the context of the Clean Air Act will allow new nonattainment areas to use cost-effective, high yielding emissions reduction opportunities.

ATTACHMENT 2 PROPOSAL FOR IMPLEMENTING THE EIGHT-HOUR OZONE STANDARD

The following proposal flows directly from the principles articulated in Attachment 1. The proposal discusses mechanisms available to EPA and the States through the Clean Air Act to address ozone transport, downwind contributions, and overall accountability for ozone nonattainment and attainment.

I. TRANSPORT CONSIDERATIONS WHEN MAKING DESIGNATIONS

Section 107(d)(1)(A)(i) provides that the Governors submit letters indicating a list designating as nonattainment any area that “does not meet (or that contributes to ambient air quality in a nearby area that does not meet)” the NAAQS.

Section 107(d)(1)(B) delineates the process by which EPA must promulgate designations, including that the Administrator “may make such modifications as the Administrator deems necessary to the designations of the areas.” If a Governor does not submit a letter, EPA must designate the areas in that State.

EPA’s NO_x SIP Call and Section 126 findings have delineated contribution areas. Within those rules, EPA allows NO_x allowance trading on a 1:1 basis within the NO_x SIP Call region. Reductions within that region will impact other parts of the region, and therefore any area within that region can be considered nearby to another area within the region.

We propose that EPA use Section 107 to ensure that contributing areas are designated as nonattainment or a functional equivalent. Prior to reviewing the Governors’ designation letters which were submitted in 1999, EPA should review current 8-hour ozone monitored data and conduct analyses based on the current understandings of transport and contribution, and the contribution findings made under the NO_x SIP Call and Section 126 petitions, to determine what regions contribute to downwind areas. EPA should give each area a designation based on monitored values and whether or not the area contributes to downwind areas. If the monitored value for the area exceeds the 8-hour ozone standard or the area contributes to a downwind area that is designated nonattainment, then the area is designated nonattainment.

EPA should issue guidance to all states indicating that such analyses will be performed.

II. ADDRESSING TRANSPORT WITHIN THE CONTEXT OF SIP SUBMITTALS

Section 110(a)(2)(D)(i) states that the SIP contain adequate provisions prohibiting “any source or any type of emissions activity within the State from emitting any air pollution in amounts which will... contribute significantly to nonattainment in, or interfere with maintenance by any other State with respect to any such national primary or secondary ambient air quality standard....”

Historically, EPA has only invoked Section 110(a)(2)(D)(i) retrospectively, often after rate-of-progress and attainment SIPs have been submitted and approved. However,

under this section, it is imperative that all SIPs adequately address transport contributions. Given the newer, current scientific understandings of ozone transport, and in light of EPA's voluminous record of decision on the NOx SIP Call and the Section 126 petitions, there is ample evidence to support 110(a)(2)(D)(i) determinations up front, rather than retrospectively. Case law with respect to the NOx SIP Call supports this approach (see *State of Michigan v. EPA*, 213 F3d 663 (D.C. Cir. 2000) and *Appalachian Power Co. v. EPA*, 251 F3d 1026 (D.C. Cir. 2001))

We propose that rather than using Section 110(a)(2)(D)(i) solely as a SIP "recall" provision, EPA make Section 110(a)(2)(D)(i) determinations when reviewing SIP submittals for the eight-hour standard. These determinations must be made when an attainment SIP is initially submitted. This would require some aggressive analyses by EPA of SIPs from states that have been determined to contribute to downwind areas; such analyses were done and upheld in court under the NOx SIP Call case. EPA must establish a process during the SIP submittal and approval process to show that all areas have addressed transport in downwind areas.

To evaluate transport, EPA should conduct modeling, similar to that conducted for the NOx SIP Call in order to assess the effects of transport associated with the 8-hour ozone standard and to assign transport responsibility to States. Modeling conducted by EPA should be appropriate for the 8-hour standard (e.g., days appropriate to 8-hour ozone episodes should be modeled for this effort and projected to the timing of the various 8-hour ozone standard attainment dates (not just 2020)). One tool that would help EPA in this effort would be the completion and implementation of the consolidated emissions inventory reporting rule.

III. SIP REQUIREMENTS TO ADDRESS "LOCAL" NONATTAINMENT AND CONTRIBUTIONS TO DOWNWIND AREAS

In order for areas to address local attainment issues as well as downwind contributions, it follows that there will be a set of SIP obligations: one to attain "locally" as per the area's ozone classification status, and one to meet the area's Section 110(a)(2)(D)(i) requirements. This "two track" SIP obligation is explained as follows.

We propose that EPA use the modeling and analyses completed to assess the effects of transport associated with the 8-hour ozone standard, along with existing data, to show which areas contribute to nonattainment in other areas. EPA should also assess the extent of reductions necessary for areas to come into attainment and eliminate downwind contributions. These findings should be made public so that states are on notice that they have two distinct sets of SIP requirements. An upwind attainment SIP will not be approved until all downwind areas have approved SIPs or until it can be demonstrated that contributions to such downwind areas have been eliminated or reduced to insignificant levels.

Further, we propose that EPA require all nonattainment areas (areas having monitored exceedences or contributing to nearby areas) or areas experiencing violations of the eight-hour ozone standard to develop and submit ozone attainment SIPs that:

- a. address any significant downwind contributions for which they are responsible;

- b. contain modeling approved by EPA that shows what reductions are necessary to achieve attainment in the area and downwind.
 - i. Modeling must be included in areas that are moderate and above; (EPA has historically required moderate areas and above to perform modeling under guidance pursuant to Section 184(b)(1)(a)(i) as per legislative intent.)
 - ii. Modeling should be done over a broad area
 - iii. Upwind areas should be involved in the modeling for the attainment demonstration for the area/region (performed by the state or a consortium of states)
- c. account for growth to the attainment year;
- d. include national and regional measures: strong and timely national measures should provide the cornerstone for environmental protection as well as provide a strong baseline level of emissions control in upwind and downwind areas.
- e. include rate of progress requirements.

Maintenance SIPs would also be required, once an area has attained the standard.

Upwind areas should have flexibility with respect to specific measures, must be accountable for the measures that they choose, and ensure the specified measures meet the emission reduction requirements.

IV. CONSIDERING MODES OF TRANSPORT WHEN DEFINING NONATTAINMENT AREAS AND DETERMINING EMISSION REDUCTION REQUIREMENTS

When defining nonattainment areas, EPA must consider the various modes of ozone transport, and identify classifications and required control measures accordingly. For the Mid-Atlantic and Northeast area, two general transport scenarios emerge as follows:

1. Areas that contribute to nonattainment downwind primarily due to synoptic scale (aloft) ozone transport: In these cases, regional NO_x controls are especially warranted across the contributing area. The emission reduction obligations should be more stringent than the NO_x SIP Call. The areas should have flexibility to identify how they will achieve their emission reduction obligations.

In the absence of SIP requirements that address this type of transport scenario, states have the option of submitting Section 126 petitions; however, it is preferable that these issues are addressed within the context of the attainment SIP.

2. Areas that contribute to nonattainment downwind because of ground-level transport. This type of transport is driven by low-level emission sources of both VOC and NO_x (primarily mobile, area, and small stationary sources) and continuing emissions growth. Along the East Coast, this transport scenario is generally driven by southwest to northeast winds that push a ground-level cloud of ozone along the I-95 Corridor. This type of transport can be enhanced by “nocturnal jets” that can push an ozone cloud for hundreds of miles over a single night. For this type of transport scenario, there should be

some degree of equity across the entire contributing area between the controls that affect low-level NO_x and VOC sources. These types of sources are often best controlled by national or regional rules. The areas should have flexibility to identify how they will achieve their emission reduction obligations.

There are no traditionally invoked Clean Air Act provisions similar to Section 126 that address mobile or area sources. It is important that EPA establish SIP mechanisms requiring high growth areas that contribute to downwind areas due to ground transport to be held accountable for their contributions.

V. ADDRESSING TRANSPORT WITHIN THE CONTEXT OF NEW OZONE TRANSPORT REGIONS

The OTC States want to ensure that transport is dealt with within the context of designations under Section 107 and SIP approvals under Section 110. Under Section 176A(a), EPA may create ozone transport regions (OTRs) if there is reason to believe that transport contributes significantly to violations in downwind areas. Through its NO_x SIP Call, EPA has determined areas of significant contribution to downwind nonattainment areas in the eastern United States (see NO_x SIP Call, Tables II-5 and II-7 in 63 Federal Register at 57394 and 57396). Therefore, EPA has essentially made the determination necessary to create OTRs that would include these contributing states.

Should the EPA find that it must establish OTRs in order to address ozone transport, we propose that:

1. OTRs be significantly large regions. An OTR:
 - May contain smaller, nested nonattainment areas
 - Or may be established as one large transport area that is required to have NO_x controls, with smaller areas within the region required to install VOC controls, regardless of attainment status.
2. OTRs be subject to the control requirements of Section 184
3. Specific rate of progress requirements apply
4. Established OTRs across the US, should not automatically mirror the current Regional Planning Organizations, but should be based on the sound science that already exists with respect to ozone transport.

An example of how the NO_x SIP Call states could be assigned to logical, science-based transport regions of common interest is contained in Attachment A.

There is also an option available under Section 176A (a) that allows for the expansion of existing ozone transport regions in cases where transport contributes significantly to ozone nonattainment. Using this section, a State in the OTC or any established ozone transport region could petition EPA to expand that region to include states or portions of states that significantly contribute to ozone violations in downwind areas.

If each OTR were to appropriately address its ozone problem, including its contribution to areas downwind and across its regional borders, it would positively affect the air quality throughout the Eastern U.S.

VI. CLASSIFICATIONS AND CUTPOINTS

The area classification scheme provided for in Section 181, Table 1 should be used, establishing marginal, moderate, serious, severe, and extreme area classes. We believe this best comports with the February 27, 2001 Supreme Court decision.

Submarginal areas should not be established because areas that do not attain the standard must have mechanisms in place to address future growth.

We propose that cutpoints and classifications reflect the following:

1. that the eight-hour 0.08 ppm ozone standard is more robust than the one-hour 0.12 ppm ozone standard;
2. that category labels (i.e., marginal through extreme) accurately reflect the public health significance of the ozone problem for the areas. A classification scheme that places all violating areas in the lowest category does not serve the public health (e.g., if an area with significant frequency and magnitude of ozone exceedences is labeled as moderate, that presents an inappropriate public health message). Categories should allow reasonable time to attain the standard, as appropriate, but with specific phased in rate of progress requirements for every 3-year period.

VII. ENSURING PROGRESS TOWARDS ATTAINMENT

Whichever scheme is chosen for assigning attainment dates to the various classifications, provisions must be incorporated to ensure that reasonable progress is made to attain the standard over time. Incentives should be in place to ensure that all areas implement controls as quickly as possible, or alternately penalties/sanctions should be in place for not doing so. Later attainment dates should not allow areas to delay developing SIPs or implementing measures.

There are two options we propose to address this issue:

1. Have all directly adjacent nonattainment areas have the same attainment date. If this were the case, clear rate of progress requirements including mechanisms to ensure this rate of progress towards attainment, must be included.
2. Have attainment date obligations mirror the two-track SIP submittal scheme described in Section III, above. In this case, contributing areas would have two attainment obligations. One is to be able to monitor attainment of the eight-hour ozone standard by the date accorded the area's classification. The other is that the attainment SIP must not be approved until the area can demonstrate it has eliminated its contribution to downwind nonattainment areas that may have differing attainment years.

The following provides an example of how such a scheme would work:

A contributing area's attainment date is 2005

The downwind area's attainment date is 2010

Both areas owe their attainment/contribution SIPs in 2003

The contributing area's SIP must include:

1. Measures to meet 2005 date locally
 - No modeling would be required; "local attainment" would be based on monitors
2. Measures to reduce contribution sufficiently to provide for attainment in 2010 downwind area
 - Based on regional modeling done between all areas in contribution region

The downwind area's SIP must include:

1. Measures to meet phased rate of progress reduction targets (to ensure expeditious implementation) in 2005 and 2008 (or another date for the latter progress obligation)
2. Measures to provide for attainment by 2010
 - Based on regional modeling done between all areas in the contribution region

What happens in 2003:

Scenario 1: Best-case

- All measures adopted in both areas and regional modeling shows region wide attainment
- All SIPs approved

Scenario 2: Contributing area/downwind area has problems

- Upwind area adopts measures it needs for local attainment
- Adopted measures in both areas do not show modeled attainment
- Both SIPs disapproved and sanctions process started

What happens in 2005:

- Monitor shows that contributing area attains
 - EPA deems the area in "conditional attainment"
- Monitors show nonattainment
 - Contributing area is bumped up

What happens in 2010:

- If all monitors show levels below the standard:
 - Everyone is attainment
- If the contributing area meets standard and the downwind area is in nonattainment:
 - Both areas are bumped up and required to revise their Attainment/Contribution SIPs

VIII. TRANSITION FROM THE ONE TO EIGHT-HOUR OZONE STANDARD

There can be no backsliding on one-hour ozone requirements.

We propose that EPA not revoke the one-hour standard in areas monitoring attainment until eight-hour SIPs are submitted and approved.

One-hour maintenance plans must be in place during the transitions from one to eight-hour ozone standard to ensure that growth is accounted for during the transition period

IX. FLEXIBILITY IN ADDRESSING TRANSPORT

While transport may be addressed through the creation of ozone transport regions, downwind states that have nonattainment areas primarily due to significant contribution from upwind areas should be offered flexibility in implementing measures.

Attachment A

An Option for Creating Ozone Transport Regions

Note that there are some “crossover” states; these would help ensure the interests of adjacent transport regions are addressed:

1. The Northeast Ozone Transport Region (NEOTR):

Virginia, District of Columbia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine

2. The Southeast Ozone Transport Region (SEOTR):

Alabama, Tennessee, Georgia, South Carolina, North Carolina, and Virginia; possibly include Florida

3. The Ohio Valley Ozone Transport Region (OVOTR):

Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia; possibly include Illinois, Tennessee, and Maryland

4. The Great Lakes Transport Region (GLOTR):

Missouri, Wisconsin, Illinois, Indiana, Michigan, and Ohio; possibly include Pennsylvania and New York

5. The Gulf Coast Transport Region (GCOTR):

Texas, Louisiana, and Mississippi; possibly include Alabama and Florida