PETITION FOR RECONSIDERATION

PURSUANT TO SECTION 307 OF THE CLEAN AIR ACT, 42 U.S.C. § 7607

To the United States Environmental Protection Agency for Reconsideration of Air Pollution Control -- Transport of Emissions of Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2); Final Rule

Submitted by the State of North Carolina

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UNITED STATES OF AMERICA
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Air Pollution Control -- Transport of Emissions of Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2); Final Rule	)))	Docket No. EPA–HQ–OAR–2004–0076

PETITION FOR RECONSIDERATION
BY THE STATE OF NORTH CAROLINA

Pursuant to section 307 of the Clean Air Act (the "Act"), 42 U.S.C. § 7607, the State of North Carolina ("State"), through the undersigned counsel, files this Petition for Reconsideration and requests that the Administrator convene a proceeding to reconsider the above-captioned rule, i.e. Air Pollution Control -- Transport of Emissions of Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2); Final Rule, 71 Fed. Reg. 25,328 (28 April 2006) ("Final 126 Rule"). In support of this Petition, the State shows the following:

I. EPA ANNOUNCED IN THE FINAL RULE A NEW AND UNLAWFUL METHOD FOR DETERMINING SIGNIFICANT CONTRIBUTION

In the Final 126 Rule, EPA replaced the second step of the "significant contribution"[1] analysis with a new test, a "feasibility/cost effectiveness" test. Final 126 Rule, 71 Fed. Reg. at 25,335. In this new test, EPA has used the timing of controls -- which formerly it had said was a function of technical feasibility constraints and was considered only after "significant contribution" had already been determined -- as an input into its evaluation of "significant contribution." This new test represents a substantial and legally impermissible departure from both the proposed rule as well as prior EPA actions. See Rulemaking on Section 126 Petition from North Carolina to Reduce Interstate Transport of Fine Particulate Matter and Ozone, Etc., 70 Fed. Reg. 49,708 (24 Aug. 2005) ("Proposed 126 Rule").

[1] References throughout this Petition for Reconsideration to the "significant contribution" standard are intended to also refer to the "interfere with maintenance" standard unless the context implies otherwise.

In the Proposed 126 Rule, EPA incorporated from the Clean Air Interstate Rule rulemaking a two-part test for determining "significant contribution." See Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone, Etc., 70 Fed. Reg. 25,162 (12 May 2005) ("CAIR"). In step one, EPA performed an air quality assessment to identify if any upwind source or group of sources exhibited a threshold air quality link to downwind nonattainment. In step two, EPA conducted an assessment of control costs in order to determine the amount of emissions that were "significant" and hence should be eliminated. EPA was very clear in the CAIR proceeding, which in part formed the technical basis for the 126 Rule, that feasibility constraints affected the timing of any required emissions reductions, but not the necessity for those reductions:

> [O]nce a State's emissions are determined to contribute significantly to downwind nonattainment, the upwind State should reduce its emissions by the amount that results from implementation of highly cost-effective controls. The timetable for these reductions, *but not their necessity*, is determined by the feasibility constraints.

EPA, Corrected Response to Significant Public Comments on the Proposed Clean Air Interstate Rule at 58 (March 2005) ("Response to CAIR Comments"). Now, under EPA's new test, timing of controls is an element of determining significant contribution, as well as, or perhaps instead of being a function of the secondary evaluation of feasibility constraints. By its silence on the issue in the Proposed 126 Rule, EPA appeared to continue without comment its prior interpretation that technical feasibility constraints are *not* part of the significant contribution determination. Without warning EPA has reversed its position in the Final 126 Rule.

This issue is of central relevance to the rule as it formed an alternative basis for denying North Carolina the relief under section 126 for which the State petitioned. The State could not have

raised this issue sooner as this shift in EPA's methodology was not evidenced until the Final 126 Rule was signed.

EPA's unexplained departure from its previous interpretation is arbitrary and unlawful. Section 126 prohibits any source, or group of sources, from operating more than three months after EPA finds a violation of the prohibition of section 110(a)(2)(D)(i). Section 126 authorizes EPA to allow continued operation of such sources, but restricts any extension beyond three months to a maximum of three years of operation following the finding of a violation. EPA already has made the required finding in this matter. On 12 May 2005, EPA found that emissions from certain upwind sources contribute significantly to downwind areas in other states, including North Carolina, that are not meeting the national ambient air quality standards ("NAAQS") for annual $PM_{2.5}$ and/or eight-hour ozone. CAIR, 70 Fed. Reg. 25,162. This finding having been made, North Carolina is entitled to a full remedy, i.e. the elimination of that significant contribution, within the time frame established by Congress in section 126.

Instead of providing the remedy required under section 126, EPA, without notice or opportunity for comment, applied a new method for determining "significant contribution" which turns its congressionally mandated remedial provision of a three-year time limit for compliance into an excuse for EPA to deny relief to the petitioning State. The new method added a "feasibility constraint" element to the existing cost-effectiveness test. The result of this new combined test was EPA's erroneous conclusion that section 126 does not require the elimination of upwind sources' significant contribution because the control strategy of EPA's choice -- not an exclusive or required control strategy -- could not be achieved in a highly cost effective manner within the three-year period required by section 126. In response to comments EPA stated that, "[i]f all reductions sought

by ... [North Carolina's] petition were ordered within three years, *such reductions would no longer be highly cost effective*, and therefore beyond the scope of a section 126 remedy (since they would not be contributing significantly, as defined) ...." EPA, Response to Significant Public Comments Received in Response to: Rulemaking on Section 126 Petition from North Carolina to Reduce Interstate Transport of Fine Particulate Matter and Ozone, Etc. at 68 (March 2006) (emphasis added) ("Response to 126 Comments"); see also Final 126 Rule, 71 Fed. Reg. at 25,336. In short, EPA now reads section 126 to deny a State's petition if providing the expeditious relief required by the statute within the statutory time frame would cause the cost of the remedy to increase too much. The statute commands just the opposite result: If a source cannot eliminate its significant contribution within three years, it must shut down. It cannot continue to operate uncontrolled simply because controls are comparatively expensive.

EPA's use of technical feasibility constraints in this manner is directly at odds with the approach employed under CAIR, and serves only to render ineffective a congressionally mandated remedy for States to deal with interstate air pollution. In CAIR, EPA found that sources in certain upwind states contribute significantly to downwind nonattainment. The test to determine significant contribution consisted of an air quality component and a cost-effectiveness component. EPA, by its admission, did not use technical feasibility constraints to determine what sources were significantly contributing to downwind air quality. Instead, EPA applied the technical feasibility analysis after making its determination of significant contribution, and then solely to establish an emission reduction schedule. Response to CAIR Comments at 58 ("The timetable for these reductions, but not their necessity, is determined by the feasibility constraints.")

Under both sections 110(a)(2)(D)(i) and 126, significant contributions by upwind sources to downwind nonattainment are required to be eliminated. One important difference between the two statutory mandates is in the timing of the remedy. Under section 110, the required elimination of the significant contribution is implemented by the States through their implementation plans (or by a federal implementation plan should the State fail to secure approval of its plan), but the schedule for reductions is not defined. In a prior rulemaking, EPA conceded that "section 110(a)(2)(D)(i) is silent as to the implementation schedule for measures to prevent significant contribution ...." EPA, Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, 63 Fed. Reg. 57,356, 57,449 col. 1 (27 Oct. 1998) ("NO_X SIP Call"). Likewise, in CAIR, EPA found that one possible control strategy under section 110 -- the control of EGUs -- required an extended compliance schedule based on its technical feasibility constraint analysis.

Whatever discretion EPA may have with regard to timing under section 110, that discretion is circumscribed under section 126. Unlike in section 110, in section 126 Congress was not silent as to the schedule by which the significant contribution from upwind sources was to be eliminated. Sources that are determined to significantly contribute to nonattainment, or interfere with maintenance are prohibited from "operat[ing] more than three months after such a finding has been made with respect to it." 42 U.S.C. § 7426(c)(2). Congress, in paragraph (c) of section 126, plainly authorized EPA to "permit the continued operation of a source ... beyond the expiration of such three-month period" as long as the source adheres to a schedule "to bring about compliance ... as expeditiously as practicable, but in no case later than three years after the date of such finding." Id. § 7426(c).

Under this statutory scheme, a source in violation of this provision cannot operate beyond three months unless EPA authorizes such continued operation under a compliance schedule that, by law, cannot exceed three years beyond the date on which the finding of significant contribution was made. By introducing this new "technical feasibility constraint" test to define what constitutes a significant contribution, EPA has effectively supplanted Congress' specific and strict compliance time frame in section 126 and replaced it with an arbitrary schedule based entirely on how long it would take to install emission controls at a cost EPA determines is highly cost effective. The result is to turn the congressional remedy for affected downwind states into a rationale to deny them relief. This defies congressional intent.

If EPA is correct that the definition of "significant contribution" must be the same in both sections 110 and 126, then neither can include the concept that the timing of the remedy affects the cost effectiveness calculus. Under section 110, EPA may be allowed to consider feasibility constraints in order to establish a schedule for compliance. Indeed, this is exactly the interpretation that EPA adopted in CAIR but has now jettisoned, without explanation, in this rulemaking. When EPA determined in CAIR that it would not require shorter compliance periods, it did so on the ground that compliance under shorter time frames was not technically feasible given resource constraints. EPA never determined what effect changing the compliance period would have on the cost of the remedy. As indicated above, technical feasibility in this sense went only to the timing of the remedy, which is a determination that is made only after EPA concludes that a source is significantly contributing to downwind nonattainment. Thus, under section 126 the sources already found by EPA through the CAIR rulemaking to contribute significantly to downwind nonattainment in North Carolina have three choices: (1) come into compliance within three months, (2) with EPA

approval, adopt a compliance schedule that will bring about compliance as expeditiously as practicable but no later than three years, or (3) stop operating.

Despite EPA's suggestion that shortening the time frame to implement controls would result in an increase in costs and render the control level no longer highly cost effective, EPA's technical approach to both CAIR and North Carolina's Petition Pursuant to Section 126 of the Clean Air Act, Etc. (18 March 2004) ("126 Petition"), would not have led to such a result. For both rulemakings, EPA modeled cost effectiveness such that costs did not respond to labor and/or resource constraints resulting from compliance deadlines. See EPA, Documentation Summary for EPA Base Case 2004 (V.2.1.9) Using the Integrated Planning Model at § 5 (Oct. 2004); EPA, Documentation of EPA Modeling Applications (V.2.1) Using the Integrated Planning Model at 5-4 (March 2002) ("IPM Documentation") ("The cost and performance equations in the scrubber report were primarily a function of heat rate, capacity, and sulfur content.") As discussed in the following section, EPA modeled cost and resource/timing issues separately. Thus, EPA's bald assertion that complying with the three-year section 126 requirement "would" result in controls "no longer be[ing] highly cost effective" is not supported by the record. In fact, more recent modeling, which integrates feasibility constraints, shows that the SO_2 controls requested by North Carolina can be implemented within three years despite these feasibility constraints (see below).

Congress left no room in section 126 for EPA to define "significant contribution" in order to render the time limitation in section 126 essentially meaningless or worse, a reason to deny relief to petitioning States. The language Congress elected to use in section 126 stands in stark contrast to other sections of the Act in which Congress expressly authorized and directed EPA to consider the technical feasibility of control measures. For example, section 172 of the Act provides:

> The attainment date for an area designated nonattainment with respect to a national primary ambient air quality standard shall be the date by attainment can be achieved as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment under section 107(d), except that the Administrator may extend the attainment date to the extent the Administrator determines appropriate, for a period no greater than 10 years from the date of designation as nonattainment, considering the severity of nonattainment and the availability and *feasibility of pollution control measures*.

42 U.S.C. § 7502(a)(2)(A) (emphasis added). Under Section 172(a)(2), Congress expressly authorized the extension of compliance deadlines based on consideration of the technical feasibility of installing control technology. No such provision authorizing EPA to use technical feasibility constraints to extend compliance deadlines is contained in section 126. The express exemption in section 172 makes clear that had Congress intended to authorize EPA to permit a deadline extension based on technical infeasibility, it knew exactly how to so provide. Instead, EPA appears to have simply inserted into the statutory language, through the redefinition of the phrase "significant contribution," a technical feasibility exemption from the three-year deadline where clearly none either exists or was intended.

EPA's interpretation of section 126 also fails to account for the inherent variability of the state implementation plan ("SIP") process to the extent that EPA is correct that a section 110(a)(2)(D)(i) SIP can serve to displace the need for a remedy under section 126. States are free to design SIPs in any manner provided that they eliminate the significant contribution of sources within the state. Section 110 "does not require that States achieve the required emission reductions by controlling particular source categories ...." CAIR, 70 Fed. Reg. at 25,215 col. 1; see also Proposed 126 Rule, 70 Fed. Reg. at 49,721 col. 2 ("States have flexibility in how to achieve the CAIR emission reductions.") States can select from the range of mobile and area sources, non-EGU

boilers and turbines, and other non-EGU stationary sources in designing a SIP to eliminate their significant contribution. Because each SIP could employ a unique mix of controls, each SIP would have its own technical feasibility constraint analysis and thus its own implementation schedule based on that specific control strategy. EPA's introduction and use of the technical feasibility constraint analysis within the cost effectiveness analysis to define significant contribution results in an unbounded implementation schedule limited only by the temporal "constraints" of the control strategy selected by each State. This would unlawfully turn over to the States the development of implementation schedules that Congress reserved for itself and EPA under section 126.

For all of these reasons, EPA's use of technical feasibility constraints as part of the calculus of determining significant contribution is contrary to the statute, contrary to EPA's prior interpretation and practice, arbitrary, and unlawful.

II. RECENT MODELING DEMONSTRATES THAT SUBSTANTIALLY MORE SO_2 REDUCTIONS ARE BOTH TECHNICALLY FEASIBLE AND COST EFFECTIVE

In the previous section, the State demonstrated that "technical feasibility" is not an element of determining whether a significant contribution exists. In this section, assuming *arguendo* that EPA may consider technical feasibility in this context, the State -- using modeling runs released by EPA after the comment period for this rule closed -- shows that further reductions of SO_2 can be obtained cost effectively and technically feasibly in the three-year time frame allowed by section 126.

In the Final 126 Rule, EPA alleged that "[r]equiring ... reductions to occur on a more rapid time frame would thus require considerably more than merely eliminating significant contribution, and so would exceed the scope of section 126." Final 126 Rule, 71 Fed. Reg. at 25,336. In support of this erroneous conclusion, EPA indicated that "commenters presented no independent analysis

showing that emission reductions from the designated sources could be obtained cost-effectively (or even feasibly) within 3 years." Id.

On 27 October 2005, EPA released a series of modeling results designed to respond to Congress' need for more information regarding several competing bills that would have amended several provisions of the Clean Air Act. See EPA, Clear Skies and Legislative and Regulatory Analyses Released (27 Oct. 2005). Based on these new modeling results, EPA should reconsider the Final 126 Rule. This ground for reconsideration arose after the comment period closed. First, the model results were not available until three days after the comment period for the 126 Rule closed. Second, EPA did not include technical feasibility constraints within its interpretation of "significant contribution" until the Final 126 Rule. The discussion below was not relevant under EPA's previous interpretation. Moreover, this information is of central relevance to the rule. In the Final 126 Rule, EPA specifically noted the need for such information in order to address the issue of technical feasibility. Final 126 Rule, 71 Fed. Reg. at 25,336; see also Response to 126 Comments at 70 ("EPA notes further that the Petition ... offers no additional data on feasibility or cost effectiveness on controls on the enumerated sources.") The demonstration below counters a fundamental conclusion of EPA that allegedly supports the denial of the petition, i.e. that there is no significant contribution to North Carolina. This issue clearly is of central relevance to the application of the law to the facts, and to the outcome of the rulemaking.

A. EPA's Recent Analysis Provides a Sound Basis for Analyzing the Cost Effectiveness, Including Technical Feasibility, of the Proposed Section 126 Remedy

One of the bills that EPA included in its October 2005 suite of analyses was Senate Bill 843 (108th Cong.) ("S. 843"). The State's proposed section 126 remedy and the S. 843 program are

sufficiently similar that the modeling of S. 843 can be used to evaluate the State's proposed section 126 remedy.

Senate Bill 843 would have controlled those sources that are controlled by the Title IV Acid Rain Program ("ARP"). This includes "existing" (i.e. pre-1990) electric generating units ("EGUs") with a nameplate capacity of at least 25 megawatts ("MW"), and all new (i.e. 1990 or later) EGUs regardless of size. Certain cogeneration units are also included in the ARP and therefore would have been included in the S. 843 program. See EPA, Multi-Pollutant Legislative Analysis: The Clean Air Planning Act at 10-12 (Oct. 2005) ("EPA S. 843 Analysis Summary"). Similarly, the State's proposed section 126 remedy generally would regulate EGUs of 25 MW or more and certain cogeneration units.

Both the 126 Petition and S. 843 would have regulated generally the same categories of sources. Unlike the State's proposed section 126 remedy, S. 843 would also have regulated new EGUs (i.e. 1990 or later) of less than 25 MW nameplate capacity. According to EPA, EGUs of less than 25 MW (of any age) represent about two percent of the total SO_2 emissions from the universe of EGUs in the CAIR region. EPA also believes that "there are very few" new EGUs of less than 25 MW. CAIR, 70 Fed. Reg. at 25,276. Therefore, the fact that S. 843 would regulate some of these smaller EGUs while the section 126 remedy would not is not significant.

Senate Bill 843 would have imposed SO_2 controls beginning 1 January 2009 and the proposed section 126 remedy would require controls by 14 May 2009. In other words, the proposed section 126 remedy would have permitted four and a half months *more* for compliance than S. 843. Because EPA assumed for the purposes of its modeling that S. 843 would become law on 1 January 2006, the implementation interval for S. 843 was identical to the maximum time permitted under

section 126, i.e. three years. See EPA, Feasibility of Installing Pollution Controls to Meet Phase I Requirements of Various Multi-Pollutant Legislative Proposals at 3 (Oct. 2005) ("Feasibility TSD"). In any event, sources have already begun to plan for and implement the CAIR budgets, substantially mitigating any disparity at the front end of the implementation period.[2] The schedule for S. 843 and the proposed 126 remedy are substantially similar.

In the 126 Petition, the State recommended interim and final budgets for annual SO_2 (and NO_X) emissions for large EGUs in states that contribute significantly to North Carolina's nonattainment.[3] The EPA analysis of S. 843 projected emissions for these sources in 2010 under the S. 843 program. These amounts and predictions were as follows:

Requested SO_2 Emissions Budgets from the 126 Petition
and Projected 2010 SO_2 Emissions Under S. 843 and the Base Case
for EGUs Greater than 25 Megawatts (in Tons)

	Section 126 Petition		S. 843	Base Case
State	Interim	Final	2010	2010
Alabama	157,629	110,340	118,293	477,894
Georgia	213,120	149,184	164,413	584,352
Indiana	254,674	178,272	273,814	650,809
Kentucky	188,829	132,180	212,283	446,685
Ohio	333,619	233,533	150,828	1,373,038
Pennsylvania	276,072	193,250	105,879	907,768
South Carolina	57,288	40,101	97,566	196,065
Tennessee	137,256	96,079	87,818	354,455
Virginia	63,497	44,448	62,006	190,580

[2] In the Feasibility TSD, EPA notes that because the first phase requirements under S. 843 would begin in 2009, but the model was solved for 2010, sources may encounter additional concerns regarding boilermaker availability. However, EPA also assumed that sources would only begin the planning process for installing controls on 1 January 2006. In truth, sources likely began this process by no later than 10 March 2005, which is when the EPA Administrator signed CAIR. The interval from the signing of CAIR to the deadline under section 126 is over four years and two months, which exceeds the modeled interval of four years (1 January 2006 to 1 January 2010).

[3] For the purposes of this Petition for Reconsideration only, the State will accept EPA's determination that sources in only ten upwind states are linked to $PM_{2.5}$ nonattainment in North Carolina.

West Virginia	215,945	151,162	94,987	582,355
Total	1,897,929	1,328,549	1,367,887	5,764,001

See 126 Petition at Appx. B; IPM_Base_Case_2010.xls (Oct. 2005); Carper_Parsed_2010.xls (Oct. 2005).[4]

In 2010, the emissions of SO_2 from large EGUs in the states linked to North Carolina for $PM_{2.5}$ are projected to be 1,367,887 tons if S. 843 were enacted. The final SO_2 budget for large EGUs requested by North Carolina in the 126 Petition was 1,328,549 tons. EPA projected that SO_2 emissions in 2010 from these sources in the base case would be about 5,764,001 tons. The difference between the emissions levels requested by the 126 Petition and projected under the S. 843 scenario is less than 40,000 tons or less than three percent. The 126 Petition and 2010 S. 843 levels are about 77% and 76% below the 2010 baseline, respectively. Any variance between the two is negligible.[5]

The State's proposed section 126 SO_2 remedy would only apply to sources in ten states. Also, the 126 Petition indicates that controls on trading may be required to ensure that North Carolina receives the benefit of upwind reductions. See 126 Petition at 25-27. As discussed in North Carolina's previous filings, trading must be restricted to ensure that the State receives the

[4] Data for S. 843 and the base case are from parsed files that EPA used in the various October 2005 analyses and were downloaded from EPA's web site at www.epa.gov/airmarkets/mp/ in October 2005. Because the proposed section 126 remedy does not include EGUs of less than 25 MW, the emissions projections for S. 843 and the base case also exclude emissions from EGUs of less than 25 MW.

[5] A review of the CAIR modeling results and planned projects in North Carolina suggests that 40,000 tons of SO_2 can be eliminated by installation of scrubbers on less than two gigawatts of capacity. Under section 126, if these last scrubbers could not be installed within three years, the facilities would have to cease operations. It is likely, however, that if such sources were required to control, the installation of controls on these last few units would already be underway before the deadline. Therefore, these units may be so near completion that the units would be under outages anyway. See Feasibility TSD at 4. In any event, these units should be able to complete any needed reductions soon after the deadline, resulting in little or no disruption in energy markets.

remedy to which it is entitled under section 126. For example, trading may be limited such that no allowances can be conveyed to any source within the ten linked states from any source outside those states, but within the ten-state region trading would not be restricted (unless a "hot spot" were to develop). Restrictions on trading may affect the cost effectiveness and/or feasibility of the program. However, reductions of SO_2 emissions in the ten states linked to North Carolina are projected to account for a large percentage (about two-thirds) of the projected national reductions under S. 843. The SO_2 market in these ten states should remain robust and the average and/or marginal cost of emissions reductions in these states should not be materially affected. In addition, the proposed 126 remedy would require reductions comparable to those called for in S. 843 only in a subset of ten states. Sources outside those ten states would only be required to install controls necessary to meet CAIR, which is a less stringent and less costly remedy. Thus, the cost projections for the national S. 843 program overestimate, possibly significantly, the cost of the proposed regional section 126 program.

Although there are some small differences between the S. 843 and proposed section 126 programs, the two programs are sufficiently comparable to render EPA's analysis of S. 843 a reasonable tool to evaluate the cost effectiveness and technical feasibility of the proposed section 126 program.

B. EPA's Analysis of S. 843 Shows that the Proposed Section 126 Remedy is Cost Effective and Technically Feasible

Section 110(a)(2)(D)(i) of the Act requires States to eliminate emissions that "contribute significantly" to downwind nonattainment. According to EPA, the assessment of "significant contribution" has two components. See generally Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000),

cert. denied, 532 U.S. 904 (2001). First, the upwind source does not make a "significant contribution" if it does not contribute above a threshold amount of a criteria pollutant to the ambient levels of that pollutant at the downwind receptor. EPA has already determined that large EGUs in the following states contribute threshold amounts to $PM_{2.5}$ levels at relevant sites in North Carolina: Alabama, Georgia, Indiana, Kentucky, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. CAIR, 70 Fed. Reg. at 25,247-49.

Second, the amount of emissions from sources in these linked states that are said to "contribute significantly" to downwind pollution problems is the amount that can be eliminated with the use of controls that are "highly cost effective." In CAIR, EPA concluded that the control remedy selected for that program was highly cost effective. This conclusion was based on two corroborative analyses which are discussed below. In addition, EPA concluded that even if controls are "highly cost effective," EPA could not mandate the controls on a schedule that was not technically feasible, considering resource constraints. CAIR, 70 Fed. Reg. at 25,196-225.

1. "Highly Cost Effective" Controls

The determination of whether controls are "highly cost effective" has two components. First, costs of the program are compared to the costs of contemporaneous control programs for the same pollutants. Second, the costs of the program are compared to a "costs vs. emissions reductions" curve. CAIR, 70 Fed. Reg. at 25,196-215.

In the CAIR analysis, EPA collected cost data for recent programs that control the subject pollutants. EPA then determined the range of costs associated with these programs. Because the CAIR reductions fell within the low end of the range, EPA deemed the CAIR reductions to be "highly cost effective." CAIR, 70 Fed. Reg. at 25,201-04.

EPA used two ranges for this cost comparison: average cost per ton of SO_2 eliminated and marginal cost per ton. The range for the average cost was $400 to $3,400 per ton of SO_2 removed. Marginal costs of recent programs ranged from $600 to $2,200 per ton of SO_2 reduced. CAIR, 70 Fed. Reg. at 25,201-03, 25,208-10.

Using the Integrated Planning Model ("IPM"), EPA determined the average cost of the CAIR program to be $700 per ton of SO_2 and the marginal cost to be $1,000 to $1,200 per ton of SO_2. EPA found that these projected costs fell toward the low end of the ranges and therefore concluded that the SO_2 reductions required by the program were "highly cost effective" and lawful. CAIR, 70 Fed. Reg. at 25,203.[6]

EPA's analysis shows that the projected marginal cost for the 2010 phase of emissions reductions under S. 843 is $1,129 per ton of SO_2. EPA S. 843 Analysis Summary at 31. EPA's alternative IPM model run that incorporated some elasticity in electricity demand indicated that 2010 SO_2 reductions under S. 843 would cost only $1,053 per ton. See EPA, Clean Air Planning Act (Carper, S. 843) - Demand Response.pdf at 12 (Oct. 2005). These costs fit squarely within the $1,000 to $1,200 range that EPA concluded in CAIR was "highly cost effective." EPA's analysis of S. 843 does not indicate the average cost, but the average cost is virtually by definition lower than the marginal cost. For both the CAIR SO_2 and NO_X programs, the average cost was significantly

[6] EPA relied primarily on the 2015 cost projections because the budgets established for 2015 are the final budgets for the program. In this section of this Petition for Reconsideration, the State is demonstrating that more stringent controls are both cost effective and technically feasible in the 2010 time frame. Therefore, whether costs may be higher to install more controls after 2010 is not relevant. Nonetheless, the absence of any discussion of model results for later years is not intended to suggest that reductions in those years are not also highly cost effective or technically feasible. Similarly, according to EPA, EPA did not discuss for CAIR whether costs of controls under CAIR in 2020 would be highly cost effective even though EPA's October 2005 analysis indicates that control costs were projected rise almost 30% between 2015 and 2020. EPA, Multi-Pollutant Regulatory Analysis: CAIR/CAMR/CAVR at 31 ("EPA Rules Analysis Summary"); CAIR, 70 Fed. Reg. 25,201-08.

lower than the marginal cost. At a minimum the average cost was over 28% lower than the marginal cost (SO_2 reductions under CAIR in 2010). It is reasonable to conclude, therefore, that the average cost of the S. 843 program would also be significantly lower than the marginal cost. Regardless, even if the average cost was the same as the marginal cost, this still would fall within the low end of the range of average costs, which was $400 to $3,400 per ton. EPA's own modeling, therefore, demonstrates that the 2010 reductions under S. 843 are "highly cost effective."

In CAIR, EPA also analyzed the relationship between tons of SO_2 reduced and the price of the marginal ton controlled. EPA found that the cost of eliminating SO_2 begins to rise at an accelerated rate as the marginal cost per ton increases past $2,000. EPA concluded that the fact that the marginal cost for CAIR was below this mark confirmed that the program was "highly cost effective." CAIR, 70 Fed. Reg. at 25,203-05. Under EPA's analysis of S. 843, the marginal cost per ton for the 2010 SO_2 reductions is well below $2,000. Thus, under this measure as well, the 2010 SO_2 control program in S. 843 is "highly cost effective."

Based on this analysis, the SO_2 reductions that would be mandated by the first phase of S. 843 would be "highly cost effective" if considered as part of a determination of "significant contribution" under sections 110(a)(2)(D)(i) and 126 of the Act. It follows therefore that the SO_2 reductions requested by the State in its 126 Petition would also be "highly cost effective" even if implemented in three years.

2. "Technical Feasibility"

According to the Final 126 Rule, the determination of "cost effectiveness" includes an assessment of "technical feasibility." In EPA's view, technical feasibility regarding the implementation of an expeditious control remedy under section 126 would have been constrained by the lack of skilled labor, in particular boilermakers, to install the controls. EPA's recent modeling shows otherwise.

When EPA analyzed the control scenario for SO_2 for CAIR (and thus, by its assertion, for the 126 Petition), EPA selected a control level and a schedule (i.e. the two-phase CAIR schedule) that it believed would be both cost effective and technically feasible. It then modeled that control level and schedule and confirmed that it would be cost effective. Then, EPA separately considered the effect that limitations on boilermakers would have on the schedule for implementation. EPA determined that the schedule for the SO_2 controls would be technically feasible but that the schedule could not be expedited because insufficient labor would be available to construct the necessary controls in a shorter time frame. See CAIR, 70 Fed. Reg. at 25,196-215.

Because EPA bifurcated the model, the model was permitted to assume at the first step that no labor constraint existed. So the model projected that of the controls that were installed, the vast majority were boilermaker intensive scrubbers and selective catalytic reduction controls ("SCRs"). By modeling the labor constraint separately, EPA did not allow the model to adjust the mix of controls to account for the alleged lack of labor. Instead, the exercise simply concluded that some controls were technically infeasible, but failed to determine if other controls that required less boilermaker labor could be substituted while the entire scenario remained cost effective.

EPA's analysis of S. 843 demonstrates that the modeling approach used in CAIR (and therefore in the 126 rulemaking) was flawed and that a more robust and realistic model is available. EPA's modeling of S. 843 takes into account the constraint on boilermaker labor without bifurcating the exercise. EPA explained the modeled constraint as follows:

> Based upon the availability of labor and issues concerning the timing of controls, a constraint is applied in 2010 to IPM in order to limit the amount of scrubbers for SO_2 removal and/or selective catalytic reduction technology (SCR) for NO_X removal that can be built to meet the requirements of any given multi-pollutant proposal. The amount of controls that can be built in 2010 are determined by the model itself based upon the amount of labor necessary to install SCR and scrubbers and the cap levels set forth in the scenario being analyzed. For a particular scenario, the amount of SCR and scrubbers that will be chosen is based upon what is most cost-effective given the nature of the particular proposal. This constraint is consistent with the constraint used in recent EPA rulemakings such as the Clean Air Interstate Rule and the Clean Air Mercury Rule.
>
> It is important to note however, that EPA did not place additional constraints regarding boilermakers as part of this analysis (beyond the constraints previously mentioned). In other words, boilermakers are necessary for building new capacity and repowering existing electric capacity from one type of power to another (i.e., coal capacity to combined cycle gas capacity), but EPA did not factor additional demand for boilermakers resulting from new capacity and for installation of other pollution control devices, such as activated carbon injection (ACI) for mercury removal.

Feasibility TSD at 2-3.

Thus, any projected installations of scrubbers under EPA's modeling of S. 843 are projected to be technically feasible. Although this model is "consistent with the constraint used in recent EPA rulemakings" it is also a more advanced application using an integrated instead of bifurcated approach.

Because the model of S. 843 takes into account technical feasibility, it demonstrates that far more extensive SO_2 controls in the near term are highly cost effective, even under EPA's revised definition of "highly cost effective," which includes a technical feasibility component.

The October 2005 modeling illuminates and corrects a major failing of EPA's modeling approach in CAIR. The modeling of S. 843 projects that tighter control requirements and a limitation on available boilermaker labor would not render the control scenario infeasible, but would instead prompt electricity providers to implement a less boilermaker intensive solution. This would consist of (1) an interim increase in the use of use of existing natural gas capacity in lieu of coal capacity and (2) early reliance on selective non-catalytic reduction ("SNCR") instead of SCR to reduce NO_X from existing coal capacity.

EPA projected that under the S. 843 program in 2010 approximately 200 terawatt-hours of generation would be supplied from existing natural gas capacity instead of from coal-fired generators. Compare EPA S. 843 Analysis Summary at 35 with EPA Rules Analysis Summary at 35. Although virtually no new natural gas capacity would need to be created, utilization of existing combined cycle capacity under S. 843 would increase from 46.9% to 61.9% between 2007 and 2010. See EPA, Clean Air Planning Act (Carper, S. 843).pdf at 7 (Oct. 2005). Under the existing EPA rules (primarily CAIR), combined cycle capacity usage would increase by only 4.8 percentage points during that same period. See EPA, CAIR_CAMR_CAVR.pdf at 7 (Oct. 2005). By 2015, the utilization capacity under S. 843 would again resemble that under the EPA rules scenario, indicating that the increased use of existing gas capacity is projected to be only a short term measure.

In addition, under the S. 843 program early NO_X control from existing coal facilities would be accomplished primarily by use of SNCR and not SCR. With regard to the ten states linked to North Carolina for $PM_{2.5}$, EPA's modeling suggests that the first phase of S. 843 would prompt the installation of 76 SNCRs and only 20 SCRs. In contrast, under the EPA rules scenario, the first phase would include absolutely no SNCRs and 71 SCRs. In the second phases, both programs are

projected to include SCRs overwhelmingly. See North Carolina, S 843 - CAIR Comparison.xls (23 June 2006). The reason is simple: Because the boilermaker labor needed to install both scrubbers and SCRs in the early years is limited, sources are projected to implement less boilermaker intensive solutions. According to EPA, 0.343 boilermaker-years are required to install one megawatt of SCR, but only 0.010 boilermaker-years are needed to install the same amount of SNCR. Feasibility TSD at 4. In general, SCR can remove about 90% of post-combustion NO_X from a coal-fired unit, whereas SNCR removes about 35%. IPM Documentation at 5-3. However, SCR uses over thirty times the boilermaker labor to install on an equivalent size unit. Thus, despite the fact that SNCR generally does not control to the rate achieved by SCR, SNCR can achieve far more emissions reductions per boilermaker-year.

SNCR is a viable solution for compliance with broad NO_X requirements. Indeed, of the two major utilities in North Carolina that are subject to caps under the Clean Smokestacks Act, one has elected to install SCR as its primary means to achieve the NO_X cap, and the other is relying heavily on SNCR. See Progress Energy Carolinas, Inc., North Carolina Clean Smokestacks Act Calendar Year 2005 Progress Report (30 March 2006); Duke Power Co., General Assembly of North Carolina Session 2001, Senate Bill 1078 - Improve Air Quality/Elec. Utils.(NC Clean Air Legislation), 2006 Annual Data Submittal (30 March 2006).

In short, the control strategy that would be implemented to comply with S. 843, and therefore with the proposed section 126 remedy, is a viable and realistic solution that is both cost effective and technically feasible.

Nonetheless, based on the passage from the Feasibility TSD quoted above, EPA alleges two reasons why the S. 843 program is not technically feasible. First, EPA asserts that the control

scheme under S. 843 would require a dramatic investment in activated carbon injection ("ACI") by 2010. ACI is installed only to remove mercury, not SO_2. Senate Bill 843 includes a mercury control requirement. North Carolina's section 126 petition does not. This alleged difficulty with implementing S. 843 simply does not arise in the context of North Carolina's 126 Petition.

If North Carolina's proposed section 126 remedy were implemented along with other EPA rules, such as the Clean Air Mercury Rule ("CAMR"), the only ACI capacity that would be needed would be that required by CAMR. The 2010 CAMR target will be achieved primarily as a co-benefit of the controls required by CAIR. Thus, in 2010 CAMR would require only 1.9 gigawatts ("GW") of capacity to be controlled for mercury. EPA Rules Analysis Summary at 44. However, if CAIR were to be supplemented by the proposed 126 remedy, the co-benefit from the additional actions needed to meet the proposed 126 remedy may obviate completely the need for any ACI in 2010 to comply with CAMR.

In any event, any minimal amount of ACI that may be needed would likely be technically feasible. As EPA understands, "activated carbon controls do not require a significant amount of boilermakers ...." EPA, Multi-Pollutant Analysis: Comparison Briefing at 16 (Oct. 2005) ("Comparison Briefing"); EPA, Technical Support Document for the Final Clean Air Interstate Rule: Boilermaker Labor Analysis and Installation Timing (March 2005) ("The boilermaker labor requirement for this type of system [ACI] is insignificant.") Also, the relatively small amount of retrofit needed, if any, would not likely create significant management problems. See EPA S. 843 Analysis Summary at 44 (citing as a feasibility issue the "manage[ment]" problems engendered by installing over 100 GW of mercury controls at the same time as significant SO_2 controls). Therefore,

the controls required by CAMR should not interfere with the feasibility of further SO_2 controls under section 126.

Second, EPA posits that the "additional natural gas capacity" that would be required to meet the demands of S. 843 and another proposal -- Senate Bill 150 (109th Cong.) ("S. 150") -- "exceed what is feasible by 2010." Comparison Briefing at 16. However, this comment appears to be directed primarily at S. 150 and not S. 843. Senate Bill 150 would require by 2010 10.5 GW of new combined cycle gas capacity and 77.7 GW of repowered coal-to-combined cycle capacity (and 35.2 GW new renewable capacity) more than the baseline. See EPA, Multi-Pollutant Regulatory Analysis: The Clean Power Act at 44 (Oct. 2005) ("EPA S. 150 Analysis Summary"). In contrast, S. 843 in 2010 would only require 0.6 GW of new combined cycle capacity and no repowered coal-to-combined cycle capacity (and 0.4 GW of new renewable capacity) above the baseline. Senate Bill 843 would require only 0.5 GW of new or repowered natural gas capacity above that which would be required under existing EPA rules. EPA's analysis deems these EPA rules to be technically feasible even considering timing constraints. Therefore, at most under S. 843 only 500 MW of "additional natural gas capacity" is not feasible. This amount is insignificant. Installing controls on an additional 500 MW of coal-fired capacity instead of replacing that capacity with a new gas-fired unit likely would not result in any unnecessary outages in order to comply with the three-year deadline in section 126. See footnote 5.

Based on EPA's modeling of S. 843, the State submits that substantially more SO_2 controls than those required under CAIR are highly cost effective (including technically feasible) within the time frame allowed by section 126.

III. EPA INACCURATELY CLAIMS THAT THE NO_X SIP CALL AUTHORIZED A SIX YEAR TIME FRAME FOR ACHIEVING UPWIND EMISSIONS REDUCTIONS

In a footnote in the Final 126 Rule, EPA claims that the date for achieving the budgets under the NO_X SIP Call was six years from the rule's promulgation date rather than three years. Final 126 Rule, 71 Fed. Reg. at 25,336 n.8. By this, EPA suggests that the compliance deadline for securing the installation of controls under the NO_X SIP Call was not within the three years allotted under section 126. EPA concludes, apparently, that despite the three-year limitation in section 126, the fact that the NO_X SIP Call did not require a full remedy within three years supports EPA's position that a full remedy is not required within three years. EPA's premise is faulty because it confuses the date on which full implementation of controls was required under the NO_X SIP Call with the date for demonstrating achievement of the budgets.[7]

In the NO_X SIP Call, EPA determined that the required implementation date for NO_X controls must be no later than 1 May 2003. The agency repeatedly referred to 1 May 2003 as the compliance deadline for implementation of SIP required NO_X controls. For example, EPA stated:

> EPA believes that requiring implementation of the SIP-required upwind controls, *and thereby mandating those upwind reductions, by no later than May 1, 2003*, is consistent with the purpose and structure of title I of the CAA .... The implementation date of May 1, 2003 fits with both the more general requirement for areas to attain "as expeditiously as possible" and the latest attainment dates that apply for purpose of the 1-hour standard and that EPA will establish for the 8-hour standard.

[7] While the State believes that the issue of why three years is the maximum time frame for installing controls under section 126 was raised with reasonable specificity during the comment period, and that EPA's discussion of the NO_X SIP Call deadlines need not be separately addressed, out of an abundance of caution, North Carolina is compelled to address EPA's misleading characterization of the NO_X SIP Call, which was raised for the first time in the Final 126 Rule. This issue is of central relevance to the rule, as EPA relies on its mischaracterization of the NO_X SIP Call to demonstrate, allegedly, that North Carolina is not entitled to a remedy within three years despite the statutory mandate to the contrary. The expeditious timing of the remedy under section 126 is a primary distinction between sections 110 and 126 and an important reason why North Carolina continues to vigorously pursue its rights under section 126.

NO_X SIP Call, 63 Fed. Reg. at 57,449 (emphasis added). Indeed the original language of the NO_X SIP Call rules mandated that NO_X SIP Call implementation plans must "[r]equire[] full implementation of all such control measures by no later than May 1, 2003," i.e. three years from the court-ordered date by which the coincident section 126 petitions were to be deemed granted. Id. at 57,492 col. 1; see also Section 126 Rule: Revised Deadlines, 67 Fed. Reg. 21,522, 21,523-25 (30 April 2002); id. at 21,525 (referring to deadline as "the ... compliance deadline for all sources subject to the Section 126 Rule").

The time frame for implementing controls and effecting required reductions under the NO_X SIP Call was three years, not six. To the extent that EPA's footnote in the Final 126 Rule maintains otherwise, it is inaccurate.

The primary significance of the 2007 date in the NO_X SIP Call was to set the time by which affected States were required to demonstrate compliance with their respective NO_X budgets. NO_X SIP Call, 63 Fed. Reg. at 57,450. Because the technical data generated by the Ozone Transport Assessment Group ("OTAG") to support the rule was oriented toward 2007, EPA chose to save its time and resources, and continue to use the OTAG date. As EPA explained, using the 2007 date would allow EPA to make use of the substantial technical information already collected by OTAG. Id. Nevertheless, in the NO_X SIP Call, EPA made clear that while 2007 was an appropriate demonstration date, States were expected to require all controls necessary for the achievement of these budgets to be installed and operating by 1 May 2003. Id. This is exactly what was required by section 126. EPA's sudden and unprecedented suggestion that the NO_X SIP Call anticipated a six-year time frame for upwind emissions controls to be installed is incorrect and misleading.

IV. EPA'S SUGGESTION THAT IT "MIGHT" REQUIRE A HIGHER LEVEL OF COST EFFECTIVENESS FOR EMISSION REDUCTIONS REQUIRED BY THE "INTERFERENCE WITH MAINTENANCE" STANDARD THAN FOR EMISSION REDUCTIONS REQUIRED BY THE "SIGNIFICANTLY CONTRIBUTE TO NONATTAINMENT" STANDARD IS ARBITRARY, CAPRICIOUS, AND UNLAWFUL

In the Final 126 Rule, for the very first time,[8] EPA suggested that the test for whether an affirmative finding should be made under the "interference with maintenance" prong of section 110(a)(2)(D)(i) "might require that reductions be even more highly cost effective" than under the "significant contribution" prong. Final 126 Rule, 71 Fed. Reg. at 25,337 col. 2. EPA's only attempt to justify this position was based on its allegation "that maintenance addresses the less significant environmental effect ...." Id.

While EPA's consideration of cost under section 110(a)(2)(D)(i) has been judicially affirmed, nothing in the statute evidences any support for the notion that the "interfere with maintenance" standard should require a different showing with regard to these costs than the "significant contribution" standard. Indeed, EPA's past practice has treated these parts of the statute similarly. For example, the upwind-downwind linkage aspect of the determination under both the "interfere with maintenance" test and the "contribute significantly" test is the same "weight of evidence" approach. See NO_X SIP Call, 63 Fed. Reg. at 57,379. Also, in CAIR EPA, in technical detail, discussed the application of the "interfere with maintenance" prong to receptor sites that were initially exceeding the standard. See, e.g., CAIR, 70 Fed. Reg. at 25,195; Response to CAIR Comments at 135-51. EPA indicated that even if it had to justify both stages of the CAIR remedy

[8] Because EPA made this suggestion for the first time in the Final 126 Rule, the State could not have commented on it earlier. EPA's interpretation of the standard under the "interfere with maintenance" test is of central relevance to the outcome of the rule in that it affects a very basic component of the remedy, and therefore drives the determination of the amount of out-of-state emissions to which the citizens of North Carolina will be subjected.

independently, those sites that would attain by 2015 were still qualified for the second phase of the CAIR remedy under the "interference with maintenance" prong. EPA never suggested that such sites were only entitled to "more highly cost effective [upwind] controls" in the second phase. Implicit in that discussion is that such sites were in fact entitled to the very same "highly cost effective" upwind controls as the "significant contribution" sites.

EPA's stated justification -- that only "more highly cost effective" controls are needed to address the alleged less significant environmental effect -- is not rational. According to EPA, under the "significant contribution" analysis, once an upwind-downwind air quality link is established, the amount of reductions to which a downwind nonattainment area is entitled is entirely cost driven. The amount of required reductions is not in any way determined by the amount by which the downwind area exceeds the national standard. Cf. Response to 126 Comments at 38 ("EPA does not read either section 126 or section 110(a)(2)(D) as guaranteeing any particular environmental result"). That is, EPA's interpretation of the statute to require a cost analysis is not connected to the environmental aspect of these statutory sections. For EPA to reintroduce that concept here defies its own interpretation of the statute.

For example, a downwind $PM_{2.5}$ or ozone nonattainment area that is not significantly impacted by EGUs but is impacted by other categories of out-of-state emissions, may not be entitled to *any* relief from those impacts even under the "highly cost effective" standard. See CAIR, 70 Fed. Reg. at 25,213-15. But a downwind $PM_{2.5}$ "interfere with maintenance" site that is primarily impacted by EGU emissions would likely be entitled to some relief even under the "more highly cost effective" standard. Because the cost analysis is not linked to the environmental impacts in the

downwind area, EPA's attempt to justify a modification of the cost analysis based on the environmental circumstances of the downwind area makes no sense.

The lack of support in the statute for this new distinction, the consistent practice of EPA against this new interpretation, and EPA's lack of a rational justification demand that EPA abandon this construct.

V. RECENT DATA AND MODELING CONFIRMS THAT NORTH CAROLINA HAS ATTAINMENT AND MAINTENANCE ISSUES THAT ENTITLE IT TO RELIEF UNDER SECTION 126

The State is in the process of completing its SIP demonstration air quality modeling for the Charlotte-Gastonia-Rock Hill eight-hour ozone nonattainment area. Model results were not available prior to the end of the public comment period for the Proposed 126 Rule, so these model results are a proper basis for reconsideration.[9] This model, which incorporates planned reductions under North Carolina's Clean Smokestacks Act (which includes NO_X controls on all Duke Energy units in the region), projected reductions under CAIR, and reductions due to local programs, predicts that the design value for this area will be 85 parts per billion ("ppb") in 2009. See Affidavit of Sheila Holman (26 June 2006) (attached as Exhibit A). One monitor in Mecklenburg County is projected to be at 85 ppb in 2009, one monitor in Mecklenburg is projected to be at 84 ppb, and two monitors in nearby Rowan County are also projected to at 84 ppb.

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[9] The model results also are of central relevance to the rulemaking because whether the State is entitled to any relief, at least according to EPA, hinges on the projected status of air quality at the time controls are required, which, for ozone, is 2009. Here, the State is demonstrating through detailed modeling that the air quality in North Carolina is not projected to be nearly as comfortably below the ozone NAAQS as EPA had projected, even considering CAIR and other controls. The State would, of course, prefer that this was not the case and the citizens of the Charlotte area were not subjected to ozone nonattainment and/or maintenance issues. However, because the State's modeling demonstrates a continuing issue, relief from out-of-state contributors is warranted.

The $PM_{2.5}$ data discussed below in this section also was not available during the comment period on the Proposed 126 Rule. It too is of central relevance to the rule because it demonstrates continuing nonattainment problems that must be addressed expeditiously.

The national ambient air quality standard for ozone requires design values to be 84 ppb or lower. A demonstration of a future design value of 85 ppb would support relief under the "significant contribution" standard under section 110(a)(2)(D)(i) and section 126. This is so regardless of whether the area was legally designated as a "nonattainment area" at the time, as the right to relief does not hinge on any formal "nonattainment area" designation. See Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 65 Fed. Reg. 28,250, 28,286 (25 May 1999).

In any event, in the State's comments on the Proposed 126 Rule the State demonstrated that an area is entitled to a remedy so long as the State shows that the area, although attaining, is "at risk of falling back into nonattainment." See CAIR, 70 Fed. Reg. at 25,194-95; Comments of the North Carolina Attorney General re Rulemaking on Section 126 Petition, Etc. at 22-29 (24 Oct. 2005) ("NC 126 Comments"). EPA has concluded that "counties with air quality levels within 3 ppb of the standard are at risk of returning to nonattainment," and that "even if CAIR receptors were ... 3-5 ppb below the standard, they would have a reasonable likelihood of returning to nonattainment." Response to CAIR Comments at 148.

The two Mecklenburg and two Rowan County monitors are, at the least, projected to be squarely "within 3 ppb of the standard." These receptors are conclusively "at risk of returning to nonattainment." Thus, controls on out-of-state sources are necessary under the statute in 2009 to ensure that the Charlotte metropolitan area attains and maintains the standard.

The State also has seen a recent trend of concern in $PM_{2.5}$ levels in the data for the 2003-2005 design value period. The 2005 data were not available during the public comment period for the Proposed 126 Rule, so these data are a proper basis for reconsideration.

For the three counties with the highest $PM_{2.5}$ values, two counties saw an increase in the last year. One of these counties, a major urban area, is now exceeding the standard. The level in the third county showed a significant slowing of a recent downward trend.

Recent $PM_{2.5}$ Design Values in Three North Carolina Counties (in $\mu g/m^3$)

County	2001-03	2002-04	2003-05
Catawba	15.5	15.1	15.3
Davidson	15.8	15.4	15.2
Mecklenburg	14.9	14.9	15.3

See Affidavit of Hoke Kimball (26 June 2006) (Attached as Exhibit B). The State submits that this recent trend further supports the contention that North Carolina is experiencing nonattainment currently, and this nonattainment demands a remedy from upwind, out-of-state sources under section 126. See NC 126 Comments at 32 n.18.

CONCLUSION

For all of the foregoing reasons, EPA should convene a proceeding to reconsider the aspects of the Final 126 Rule that are set forth above.

ROY COOPER
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Attachments

Exhibit A: **Affidavit of Sheila Holman (26 June 2006)**

Exhibit B: **Affidavit of Hoke Kimball (26 June 2006)**

UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY

Air Pollution Control—Transport of Emissions of Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2); Final Rule	)))	Docket No. EPA–HQ–OAR–2004–0076

Affidavit of Sheila Holman

1. My name is Sheila Holman. I am Chief of the Planning Section of the North Carolina Department of Environment and Natural Resources, Division of Air Quality ("DAQ").

2. In my role at DAQ, I am responsible for supervising the State's efforts to plan for the attainment of national ambient air quality standards ("NAAQS") under the federal Clean Air Act.

3. The process of planning for attainment requires the modeling of air quality conditions at future dates to determine the effectiveness of emissions control strategies for attaining the NAAQS. With regard to planning for the attainment of the eight-hour ozone NAAQS, my staff has coordinated this modeling exercise with the Visibility Improvement State and Tribal Association of the Southeast ("VISTAS"), and the Association for Southeastern Integrated Planning ("ASIP").

4. The most recent VISTAS/ASIP model run uses emissions inventories known as Base F4. This run was completed on 16 January 2006. The Base F4 model run projects that the ozone design value in the Charlotte area in 2009 will be 85 parts per billion ("ppb"). One monitor in Mecklenburg County is projected to be at 85 ppb. Three other monitors are projected to be at 84 ppb – a second site in Mecklenburg County and two sites in Rowan County.

5. In order to complete this modeling effort, DAQ, VISTAS, and ASIP are preparing to update the emissions inventories (Base G). The Base G model results will not be available on or before 27 June 2006. I do not anticipate that the Base G results will be significantly different from the results from the Base F4 run.

6. These model runs are being completed as part of the federally mandated state implementation plan ("SIP") attainment planning process, which is not complete yet. Therefore, DAQ has not produced any reports of this modeling. The model results will be reported when the State completes its SIP demonstration.

Further this affiant says not.

This the 26th day of June, 2006.

Sheila Holman

Sworn to and subscribed before me,

this 26th day of June, 2006

Notary Public

Amy Vanderkop

My Commission expires: 3/13/10

UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY

Air Pollution Control—Transport of Emissions of Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2); Final Rule	)))	Docket No. EPA–HQ–OAR–2004–0076

Affidavit of Hoke Kimball

1. My name is Hoke Kimball. I am Chief of the Ambient Monitoring Section of the North Carolina Department of Environment and Natural Resources, Division of Air Quality ("DAQ").

2. In my role at DAQ, I supervise the collection and statistical analysis of data from the State's network of ambient air quality monitors.

3. The State's ambient monitoring network includes monitors for fine particulate matter ("PM2.5"). My staff routinely, and in accordance with all relevant laws, rules, and guidance, collects samples from this network, assures the quality of the data, and calculates the design values for comparison to the national ambient air quality standards. A design value is a summary statistic of raw ambient concentration data that is calculated according to interpretation methodology issued by EPA.

4. Design values for PM2.5 calculated from data collected in Catawba County include, for 2001-2003, 15.5 $\mu g/m^3$; for 2002-2004, 15.1 $\mu g/m^3$; and for 2003-2005, 15.3 $\mu g/m^3$.

5. Design values for PM2.5 calculated from data collected in Davidson County include, for 2001-2003, 15.8 $\mu g/m^3$; for 2002-2004, 15.4 $\mu g/m^3$; and for 2003-2005, 15.2 $\mu g/m^3$.

6. Design values for PM2.5 calculated from data collected in Mecklenburg County include, for 2001-2003, 14.9 $\mu g/m^3$; for 2002-2004, 14.9 $\mu g/m^3$; and for 2003-2005, 15.3 $\mu g/m^3$.

7. Because the values for the 2003-2005 period use air quality samples collected at regular intervals throughout the entire calendar years, which must be quality assured, reliable design values for this period could not be calculated until several months into 2006.

8. I anticipate that I will certify the raw concentrations for calendar year 2005 by 30 June 2006, and that official certification by EPA will occur probably during

July 2006. I do not expect these concentrations and the design values derived from them to change after my certification is signed. (The raw concentration values for previous years spanned by design values reported above already have been officially certified.)

Further this affiant says not.

This the 26th day of June, 2006.

Hoke P. Kimball

Hoke Kimball

Sworn to and subscribed before me

This 26th day of June, 2006.

Amy Vanderkop

Notary Public

Amy Vanderkop

My Commission expires: 3/13/10