

September 8, 2004

Mr. James I. Palmer, Jr.
Regional Administrator
U.S EPA, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

RE: PM_{2.5} Non-attainment Designations

Dear Mr. Palmer:

In your June 29, 2004 letter, you provided North Carolina with EPA's response to our state's PM_{2.5} non-attainment boundary recommendations. North Carolina has been a leader among states with regard to improving air quality and remains committed to the continued improvement of air quality and the protection of its citizens. The non-attainment boundary recommendations made by EPA include several counties that North Carolina continues to believe should be designated attainment for PM_{2.5}. Below, I state why North Carolina believes that these counties should be designated attainment. I also urge you to consider again the discussion and technical documents presented in our initial February 2004 submissions. In addition, please find attached our PM_{2.5} Designation Response Technical Support Document.

In the Greensboro/Winston-Salem/High Point area, EPA recommends that the entire counties of Stokes, Guilford, Davidson, Forsyth and Randolph be designated non-attainment. North Carolina originally recommended Davidson County only as the PM_{2.5} non-attainment boundary. We continue to believe that only Davidson County should be designated as non-attainment.

North Carolina believes that Stokes County should be designated attainment for the following reasons. While Stokes County contains the Belews Creek power plant, an analysis of forward trajectories indicates that emissions from Belews Creek do not frequently impact the PM_{2.5} monitor in Davidson County. There are also PM_{2.5} monitors currently attaining the standard in Forsyth County that lie between Stokes County and the non-attaining monitor in Davidson County. Even if the Belews Creek facility is affecting the Lexington area, significant NO_x controls have already been installed on the plant. Selective catalytic reduction systems have already been installed on units 1 and 2 at the Belews Creek facility, and additional burner technology has been added at unit 2. This NO_x control technology began operation in 2003 and 2004. Consequently, the NO_x emissions will decrease from 43,567 tons per year to 7,022 tons per year and new SO₂ controls will be installed over the next several years as a result of the Clean Smokestacks Act. SO₂ emissions from Belews Creek will be reduced by nearly 90% in the next several years as these controls become fully operational.

Also, Stokes County is an extremely rural county, and therefore has very little mobile emissions. North Carolina believes that the current and future controls on the Belews Creek facility, the apparent small impact of Belews Creek on Davidson County, and the rural nature of the county support designating Stokes County in attainment for PM_{2.5}. If EPA continues to believe that Stokes County should be designated non-attainment because of Belews Creek, North Carolina recommends that only the Sauratown Township where the Belews Creek power plant is located be designated non-attainment.

North Carolina believes that Randolph County should be designated attainment for several reasons. The EPA L-Factor ranking for Randolph County is the lowest of the counties recommended by EPA to be designated non-attainment. Randolph County is also predominately downwind of Davidson County during the summer months when PM_{2.5} concentrations are the highest and therefore emissions from Randolph County would not be expected to contribute significantly to PM_{2.5} concentrations in Davidson County during those months. The majority of emissions within Randolph County are mobile emissions and less than 5% of the workforce commutes into Davidson County. Furthermore, the mobile source emissions will be addressed by federal rules such as heavy-duty engine standards and low sulfur diesel.

Guilford and Forsyth counties each contain PM_{2.5} monitors that are attaining the standard based on current design values. The counties also lie to the north and northeast of Davidson County, which makes Guilford and Forsyth counties predominately downwind of Davidson County during the summer months when PM_{2.5} is the highest. The majority of emissions from these counties are mobile, and therefore these counties and surrounding counties will benefit from federal rules addressing mobile emissions as well as the expanded North Carolina motor vehicle inspection program. They will also benefit from local measures aimed at reducing mobile emissions as part of the Early Action Compact (EAC) effort in the Triad area.

North Carolina has an analysis that shows PM_{2.5} concentration and its relationship to population density in the Triad area. The Lexington monitor does not behave the same as surrounding monitors when considering the population around the monitoring site. The analysis suggests that the higher concentrations of PM_{2.5} in Davidson County are the result of local factors rather than broader population-related regional influences and therefore the addition of counties beyond just Davidson County will not help the monitor attain the standard. Please see appendix for details.

Finally, with regard to the Lexington monitor, there has been a downward trend in the PM_{2.5} concentrations since 1999. We believe that this in considerable part reflects some reductions in the emission of pollutants in certain upwind states over that period. EPA itself has already concluded that these out-of-state sources contribute significantly to elevated PM_{2.5} in North Carolina. We expect that the downward trend should continue at this site as more emissions reductions are expected due to implementation of the Clean Smokestacks Act, NOx SIP call rules, federal heavy-duty engine standards and new fuel standards. We anticipate further improvement in Lexington monitor air quality will result from positive action by EPA on North Carolina's section 126 petition, as well as actual promulgation of the proposed Clean Air

Interstate Rule, both of which will further reduce the contribution from upwind, out-of-state sources to the Lexington area's non-attainment and maintenance problems.

For the reasons stated herein, North Carolina believes that only Davidson County should be designated non-attainment, while Stokes, Randolph, Guilford and Forsyth counties should be designated as attainment for PM_{2.5}.

With regard to the non-attaining monitor in Hickory, North Carolina continues to oppose a non-attainment designation for any area beyond the metropolitan planning organization boundary of Catawba County. There is little to be gained by including the partial counties of Burke and Caldwell in the non-attainment area for the Hickory region for several reasons. Catawba County emissions are significantly higher than both Burke and Caldwell counties in the L-Factor analysis. The bulk of emissions from these counties is from the mobile sector and therefore will benefit from state and federal rules addressing mobile emissions. There would be little to no additional opportunity to reduce mobile emissions by designating Burke and Caldwell counties as non-attainment.

A non-attainment designation for PM_{2.5} would place significant additional burdens on Burke and Caldwell counties since these counties are already participating in an EAC for ozone. These counties are making progressive strides to reduce emissions as part of the EAC effort and North Carolina feels that a designation of non-attainment for these counties would do little to reduce PM_{2.5} in Catawba County. North Carolina believes the recommendation to designate only Catawba County as non-attainment is appropriate, while Burke, Caldwell and the non-MPO parts of Catawba counties should be designated as attainment for PM_{2.5}.

Furthermore, on the basis of air quality data for 2004 gathered to date, North Carolina believes there is a significant probability that the Hickory monitor will attain the standard based on complete 2002-2004 data. We expect that it will be possible to maintain this attainment status as more emissions reductions are expected due to implementation of the Clean Smokestacks Act, NOx SIP call rules, federal heavy-duty engine standards and new fuel standards. We are also anticipating needed reductions from upwind out-of-state sources from the proposed Clean Air Interstate Rule, North Carolina's section 126 petition and other initiatives, which will help Davidson County as well. EPA already has concluded that these out-of-state sources contribute significantly to elevated PM_{2.5} in North Carolina.

North Carolina therefore suggests that EPA designate the Hickory area as "unclassifiable", if the designation is made before December 31, 2004. The designation for this area as attainment can then be finalized in February 2004 using the 2002-2004 data, assuming that it in fact shows what we anticipate. Alternatively, if the designation is made after December 31, 2004, the designation should be based on the 2002-2004 data. This approach would conserve significant federal, state and local resources by avoiding the need for the redesignation demonstration, as well as transportation conformity, in an area that is already attaining the PM_{2.5} standard.

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Finally, on June 21, 2004, I wrote to the Administrator to register our concerns regarding the recently introduced emissions-weighted approach for nonattainment boundary delineation. I reiterate those comments here. In particular, the emissions-weighted analysis fails to account for prevailing wind directions during the periods when PM_{2.5} values are higher, assumes incorrectly that emissions impact a monitor equally throughout the year, fails to consider distance between emissions and the monitors, and fails to recognize any effects from the significant reductions resulting from North Carolina's Clean Smokestacks Act. The most glaring demonstration of the weakness of the emissions-weighted approach is that some counties EPA intends to designate as nonattainment under this approach actually are in attainment according to monitors located in those counties. Moreover, this emissions-weighted analysis was introduced late and so could not be addressed by the Governors in their initial recommendations. This runs counter to the state-federal interactive process prescribed by law. For these reasons, the State believes that the use of the emissions-weighted approach is arbitrary and should not influence the final delineation of nonattainment area boundaries.

North Carolina is proud to be a leader in the improvement of air quality and is committed to the continued improvement of air quality within its borders. We have invested significant resources in understanding the nature of our air quality issues and feel confident that our recommendation to designate only Davidson and Catawba counties is sufficient for the state and EPA to continue the work toward protecting the health of our citizens. We know that you and your colleagues will give these comments careful attention as EPA evaluates and makes the final decisions on PM_{2.5} boundaries later this year. We appreciate that careful attention because we also appreciate the nature and extent of the challenge EPA faces in making these decisions across the nation.

Sincerely,

William G. Ross, Jr.

Attachment: *PM_{2.5} Designation Response Technical Support Document*

cc: Secretary Lyndo Tippet (w/o attachment)
Secretary James Fain (w/o attachment)
Keith Overcash (w/o attachment)