6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2013-0563; FRL- 9902-18-Region4]

Approval and Promulgation of Implementation Plans; North Carolina: Non-interference Demonstration for Removal of Federal Low-Reid Vapor Pressure Requirement for the Raleigh-Durham-Chapel Hill Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve the State of North Carolina's March 27, 2013, State Implementation Plan (SIP) revision to the State's approved Maintenance Plan for the Raleigh-Durham-Chapel Hill (Triangle) 1997 8-hour Ozone Maintenance Area. Specifically, North Carolina's revision, including updated modeling, shows that the Triangle Area would continue to maintain the 1997 8-hour ozone standard if the currently applicable Federal Reid Vapor Pressure (RVP) standard for gasoline from 7.8 pounds per square inch (psi) were modified to 9.0 psi for three portions (Wake and Durham Counties, and a portion of Granville County) of the "Triangle Area" of North Carolina during the high-ozone season. The State has included a technical demonstration with the revision to demonstrate that a less-stringent RVP standard of 9.0 psi in these areas would not interfere with continued maintenance of the 1997 8-hour Ozone National Ambient Air Quality Standards (NAAQS) or any other applicable standard. Approval of this SIP revision is a prerequisite for EPA's consideration of an amendment to the regulations to remove the aforementioned portions of the Triangle Area from the list of areas that are currently subject to the Federal 7.8 psi RVP requirements. In addition, EPA is also proposing to approve changes

to the motor vehicle emission budgets (MVEBs) used in the 1997 8-hour ozone maintenance plan for the Triangle Area. The use of new models and the relaxation of the RVP requirement has resulted in a revised safety margin which North Carolina is reallocating among the MVEBs associated the Maintenance Plan. EPA has preliminarily determined that North Carolina's March 27, 2013, SIP revision with respect to the changes to the modeling and associated technical demonstration associated with the State's request for the removal of the Federal RVP requirements, and with respect to the updated MVEBs, is consistent with the applicable provisions of the Clean Air Act (CAA or Act). Should EPA decide to remove the subject portions of the Triangle Area from those areas subject to the 7.8 psi Federal RVP requirements, such action will occur in a subsequent rulemaking.

DATES: Written comments must be received on or before [insert date 30 days after date of publication in the Federal Register].

ADDRESSES: Submit your comments, identified by Docket ID Number EPA-R04-OAR-2013-0563 by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: R4-RDS@epa.gov.
3. Fax: (404) 562-9019.
4. Mail: EPA-R04-OAR-2013-0563, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960.

5. Hand Delivery or Courier: Ms. Lynorae Benjamin, Chief, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Such deliveries are only accepted during the Regional Office's normal hours of operation. The Regional Office's official hours of business are Monday through Friday, 8:30 am to 4:30 pm, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R04-OAR-2013-0563. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through www.regulations.gov or e-mail, information that you consider to be CBI or otherwise protected. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional

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Docket: All documents in the electronic docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 am to 4:30 pm, excluding federal holidays.

FOR FURTHER INFORMATION CONTACT: Sean Lakeman of the Regulatory Development Section, in the Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Mr. Lakeman may be reached by phone at (404) 562-9043, or via electronic mail at lakeman.sean@epa.gov.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. What is Being Proposed?

The Triangle Area in North Carolina is currently designated attainment for the 1997 8-hour ozone NAAQS. The Area was redesignated from nonattainment of the 1997 8-hour ozone NAAQS on December 26, 2007. *See* 72 FR 72948. This rulemaking proposes to approve a revision to the 1997 8-hour ozone Maintenance Plan for the Triangle Area submitted by the North Carolina Department of Environment and Natural Resources (NC DENR). Specifically, EPA is proposing to approve changes to the maintenance plan, including updated modeling, that show that the Triangle Area can continue to maintain the 1997 ozone standard without reliance on emission reductions based upon the use of gasoline with an RVP of 7.8 psi in any of the Triangle Area counties during the high ozone season – June 1 through September 15.[1] EPA is also proposing to conclude that the new modeling demonstrates that the area would continue to

[1] As discussed further below, a separate rulemaking is required for relaxation of the current requirement to use gasoline with an RVP of 7.8 psi in the Triangle Area. While EPA evaluates the approvability of North Carolina's revision to the maintenance plan pursuant to section 110(l), the decision regarding removal of Federal RVP requirements pursuant to section 211(h) in the Triangle Area is made at the discretion of the Administrator.

attain the 1997 8-hour ozone standard with the use of gasoline with an RVP of 9.0 psi throughout the Triangle Area during the high ozone season. Consistent with section 110(l) of the Act, EPA also proposes to conclude that the use of gasoline with an RVP of 9.0 psi throughout the Maintenance Plan Areas during the high ozone season would not interfere with other applicable requirements.

The new modeling conducted by North Carolina to account for the proposed relaxation of the applicable RVP standard in a portion of the Triangle Area also results in changes to the safety margin associated with the maintenance plan.[2] As such, the North Carolina revision includes a reallocation of the safety margin among the NOx MVEBs for the Triangle Area. EPA is also proposing approval of this revision.

This preamble is hereafter organized into five parts. Section II provides the background of the Triangle Area designation status with respect to the various Ozone NAAQS. Section III describes the applicable history of federal gasoline regulation. Section IV provides the Agency's policy regarding relaxation of the volatility standards. Section V provides EPA's analysis of the information submitted by North Carolina to support a relaxation of the more stringent volatility standard in the Triangle Area. Finally, Section VI describes the changes to the MVEBs associated with Maintenance Plan for the Triangle Area and provides EPA's analysis regarding the proposed revision.

[2] In addition to a less stringent RVP standard, the new modeling also utilizes updated models for on-road and off-road mobile emission sources.

II. What is the Background of the Triangle Area?

In 1991, the Triangle Area was designated as a moderate nonattainment area pursuant to the 1-hour ozone NAAQS. *See* 56 FR 56694 (November 6, 1991). Under the 1-hour ozone NAAQS, the Triangle nonattainment area was composed of Durham and Wake Counties, and the Dutchville Township portion of Granville County. Among the requirements applicable to nonattainment areas for the 1-hour ozone NAAQS was the requirement to meet certain volatility standards (known as Reid Vapor Pressure or RVP) for gasoline sold commercially. *See* 55 FR 23658 (June 11, 1990). As discussed in greater detail below, as part of the RVP requirements associated with its nonattainment designation, gasoline sold in the Triangle 1-hour nonattainment area could not exceed 7.8 psi RVP during the high-ozone season months.

Following implementation of the 7.8 psi RVP requirement in the Triangle Area, on April 18, 1994, the Area was redesignated to attainment for the 1-hour ozone standard, based on 1989-1992 ambient air quality monitoring data. *See* 59 FR 18300. North Carolina's redesignation request for the 1-hour ozone Triangle Area did not, however, include a request for the Area to be removed from the list of areas subject to the 7.8 psi RVP standard. As such, the 7.8 RVP requirement remained in place for Durham and Wake Counties, and the Dutchville Township portion of Granville County when the Triangle Area was designated nonattainment for the 1997 8-hour ozone NAAQS. Under the 1997 8-hour ozone NAAQS, the Triangle Area was expanded from Durham and Wake Counties, and the Dutchville Township portion of Granville County, to also include Franklin, Johnston, Orange, and Person Counties, the remainder of Granville County and Baldwin, Center, New Hope and Williams Townships in Chatham County. *See* 69 FR 23857. In 2007, the Triangle Area was redesignated to attainment for the 1997 8-hour ozone NAAQS.

See 72 FR 72948, December 26, 2007. The Triangle Area was later designated as attainment for the 2008 8-hour ozone NAAQS. *See* 77 FR 30088, May 21, 2012.

III. What is the History of the Gasoline Volatility Requirement?

On August 19, 1987 (52 FR 31274), EPA determined that gasoline nationwide had become increasingly volatile, causing an increase in evaporative emissions from gasoline-powered vehicles and equipment. Evaporative emissions from gasoline, referred to as volatile organic compounds (VOC), are precursors to the formation of tropospheric ozone and contribute to the nation's ground-level ozone problem. Exposure to ground-level ozone can reduce lung function (thereby aggravating asthma or other respiratory conditions), increase susceptibility to respiratory infection, and may contribute to premature death in people with heart and lung disease.

The most common measure of fuel volatility that is useful in evaluating gasoline evaporative emissions is RVP. Under section 211(c) of CAA, EPA promulgated regulations on March 22, 1989 (54 FR 11868), that set maximum limits for the RVP of gasoline sold during the high ozone season. These regulations constituted Phase I of a two-phase nationwide program, which was designed to reduce the volatility of commercial gasoline during the high ozone season. On June 11, 1990 (55 FR 23658), EPA promulgated more stringent volatility controls as Phase II of the volatility control program. These requirements established maximum RVP standards of 9.0 psi or 7.8 psi (depending on the State, the month, and the area's initial ozone attainment designation with respect to the 1-hour ozone NAAQS during the high ozone season).

The 1990 CAA Amendments established a new section, 211(h), to address fuel volatility. Section 211(h) requires EPA to promulgate regulations making it unlawful to sell, offer for sale,

dispense, supply, offer for supply, transport, or introduce into commerce gasoline with an RVP level in excess of 9.0 psi during the high ozone season. Section 211(h) prohibits EPA from establishing a volatility standard more stringent than 9.0 psi in an attainment area, except that we may impose a lower (more stringent) standard in any former ozone nonattainment area redesignated to attainment.

On December 12, 1991 (56 FR 64704), EPA modified the Phase II volatility regulations to be consistent with section 211(h) of the CAA. The modified regulations prohibited the sale of gasoline with an RVP above 9.0 psi in all areas designated attainment for ozone, beginning in 1992. For areas designated as nonattainment, the regulations retained the original Phase II standards published on June 11, 1990 (55 FR 23658).

As stated in the preamble to the Phase II volatility controls and reiterated in the proposed change to the volatility standards published in 1991, EPA will rely on states to initiate changes to EPA's volatility program that they believe will enhance local air quality and/or increase the economic efficiency of the program within the limits of CAA section 211(h).[3] In those rulemakings, EPA explained that the Governor of a State may petition EPA to set a volatility standard less stringent than 7.8 psi for some month or months in a nonattainment area. The petition must demonstrate such a change is appropriate because of a particular local economic impact and that sufficient alternative programs are available to achieve attainment and maintenance of the 1-hour ozone NAAQS. A current listing of the RVP requirements for states can be found on EPA's website at:

http://www.epa.gov/otaq/fuels/gasolinefuels/volatility/standards.htm.

[3] See 55 FR 23658 (June 11, 1990), 56 FR 24242 (May 29, 1991) and 56 FR 64704 (Dec. 12, 1991).

As explained in the December 12, 1991 (56 FR 64704), Phase II rulemaking, EPA believes that relaxation of an applicable RVP standard in a nonattainment area is best accomplished in conjunction with the redesignation process. In order for an ozone nonattainment area to be redesignated as an attainment area, section 107(d)(3) of the Act requires the state to make a showing, pursuant to section 175A of the Act, that the area is capable of maintaining attainment for the ozone NAAQS for ten years after redesignation. Depending on the area's circumstances, this maintenance plan will either demonstrate that the area is capable of maintaining attainment for ten years without the more stringent volatility standard or that the more stringent volatility standard may be necessary for the area to maintain its attainment with the ozone NAAQS. Therefore, in the context of a request for redesignation, EPA will not relax the volatility standard unless the state requests a relaxation and the maintenance plan demonstrates, to the satisfaction of EPA, that the area will maintain attainment for ten years without the need for the more stringent volatility standard. As noted above, however, North Carolina did not request relaxation of the applicable 7.8 psi RVP standard when the Triangle Area was redesignated to attainment for the either the 1-hour or the 1997 8-hour ozone NAAQS. Rather, North Carolina is now seeking to relax the 7.8 psi RVP standard after the Triangle Area has been redesignated to attainment for the 1997 8-hour ozone NAAQS. Accordingly, the original modeling and maintenance demonstration supporting the 1997 8-hour ozone maintenance plan must be revised to reflect continued attainment under the relaxed 9.0 psi RVP standard that the State has requested.

IV. What are the Section 110(l) Requirements?

Section 110(l) requires that a revision to the SIP not interfere with any applicable requirement concerning attainment and reasonable further progress (RFP) (as defined in section 171), or any other applicable requirement of the Act. EPA's criterion for determining the approvability of North Carolina's March 27, 2013, SIP revision is whether this requested action complies with section 110(l) of the CAA. Because the modeling associated with the current maintenance plan for North Carolina is premised in part upon the 7.8 psi RVP requirements, a request to revise the maintenance plan modeling to no longer rely on the 7.8 psi RVP requirement is subject to the requirements of CAA section 110(l). Therefore, the State must demonstrate that this revision will not interfere with the attainment or maintenance of any of the NAAQS or any other applicable requirement of the CAA.

This section 110(l) non-interference demonstration is a case-by-case determination based upon the circumstances of each SIP revision. EPA interprets 110(l) as applying to all NAAQS that are in effect, including those that have been promulgated but for which the EPA has not yet made designations. The specific elements of the 110(l) analysis contained in the SIP revision depend on the circumstances and emissions analyses associated with that revision. EPA's analysis of North Carolina's March 27, 2013, SIP revision, including review of section 110(l) requirements is provided below.

Finally, EPA notes that this rulemaking is only proposing to approve the State's revision to its existing maintenance plan for the Triangle Area showing that the area can continue to maintain the standard without relying upon gasoline with an RVP of 7.8 psi being sold in the Triangle area during the high ozone season. Consistent with CAA section 211(h) and the Phase

II volatility regulations a separate rulemaking is required for relaxation of the current requirement to use gasoline with an RVP of 7.8 psi in the Triangle area. [4]

V. What is EPA's Analysis of North Carolina's Submittal?

a. Overall Preliminary Non-interference Analyses Conclusions for North Carolina's Request for the Revision of the Maintenance Plan.

As discussed above, on March 27, 2013, NC DENR submitted a revision to the existing maintenance plan for the Triangle 1997 8-hour ozone maintenance area. Specifically, NC DENR revised the modeling for on-road mobile, off-road mobile, and area source emissions. The modeling was revised to show the emission changes that would result from relaxing the gasoline RVP requirement from 7.8 psi to 9.0 psi for the Triangle Area during the high ozone season. North Carolina's March 27, 2013, SIP revision also included an evaluation of the impact that the removal of the 7.8 psi RVP requirement would have on maintenance of the 1997 and 2008 ozone standards and on other applicable NAAQS. For the purposes of this proposed change to the applicable RVP requirement, EPA is making the preliminary determination that the relevant NAAQS[5] for consideration in the non-interference demonstration required by section 110(l) of the CAA are the ozone, particulate matter and nitrogen dioxide (NO_2) standards.

VOC and NOx emissions are precursors for ozone and particulate matter (PM), and NO_2 is a component of NOx. In addition, EPA also believes that, in this instance, it is appropriate to also evaluate non-interference with respect to the carbon monoxide (CO) NAAQS. Typically,

[4] While EPA evaluates the approvability of North Carolina's revision to the maintenance plan pursuant to section 110(l), the decision regarding removal of Federal RVP requirements pursuant to section 211(h) in the Triangle Area is made at the discretion of the Administrator.

[5] The six NAAQS for which EPA establishes health and welfare based standards are CO, lead, NO_2, ozone, PM, and SO_2.

EPA would not expect the CO NAAQS to be affected by a change to RVP requirements because VOC and NOx are not precursors to CO. The revised modeling submitted by North Carolina, however, demonstrates a slight increase in CO emissions, and as such, EPA believes a non-interference review for CO is also appropriate in this case.

There are no emissions reductions attributable to the emissions of lead and sulfur dioxide (SO_2) from RVP requirements. As a result, there is no information indicating the proposed change would have any impact on those NAAQS. Additionally, the Triangle Area is currently designated attainment for the lead NAAQS, and is continuing to attain the standard. As for the SO_2 NAAQS, the Triangle Area is not designated nonattainment, and there is no available monitoring data indicating an exceedance of the NAAQS. Therefore, the analysis below focuses on the impact of North Carolina's changes to the RVP requirements on the ozone, particulate matter, NO_2 and CO NAAQS.

To determine the emissions reviewed in the technical demonstration included with the March 27, 2013, SIP revision, NC DENR compared the 2005 baseline emissions inventory to the 2017 projected emissions inventory. The baseline emissions inventory represents an emission level for a period when the applicable ambient air quality standard was not violated, 2004-2006. NC DENR concluded that if projected emissions remain at or below the baseline emissions, continued maintenance is demonstrated and the ambient air quality standard should not be violated in the future. In addition to comparing the final year of the maintenance plan, NC DENR's technical demonstration also compares all of the interim years to the 2005 baseline to demonstrate that these years are also expected to show continued maintenance of all NAAQS.

Also, in North Carolina's March 27, 2013, SIP revision, NC DENR provided an updated analysis utilizing the MOVES model to calculate on-road emissions that are used as part of the evaluation of the potential impacts for the ozone NAAQS that might result exclusively from changing the high ozone season RVP requirements from 7.8 psi to the requirement of 9.0 psi. Relaxation of the RVP standard from 7.8psi to 9.0 psi revealed a slight increase in emissions of 0.30 tons per day (tpd) (a 0.20 percent increase) in NOx and 3.88 tpd (a 2.44 percent increase) in VOC for Durham, Granville and Wake Counties. While the modeling showed a slight increase in NOx and VOC emissions resulting from the use of 9.0 psi RVP as opposed to 7.8 psi, the most appropriate analysis for purposes of evaluating non-interference is whether total area emissions from all emissions inventory sources (i.e., point and area stationary, and on-road and non-road mobile) in the future years would remain at or below the level determined to be consistent with maintenance of the 1997 ozone NAAQS. To provide this full evaluation, the State compared total man-made emissions of VOC and NOx for the year 2005 (base year), 2008 and 2011 using a RVP of 7.8 psi (for Durham, Granville and Wake Counties only as the remaining Triangle Area Counties are currently using a RVP of 9.0 psi) to emissions generated for the years 2014 and 2017, using a RVP of 9.0 psi.

There are four different man-made emission inventory source classifications; 1) point, 2) area, 3) on-road mobile and 4) off-road mobile. Point sources are those stationary sources that emit more than 10 tons per year of VOC or 100 tons per year of NOx from a single facility. The source emissions are tabulated from data collected by direct on-site measurements of emissions or mass balance calculations utilizing emission factors from EPA's AP-42, Compilation of Air Pollutant Emission Factors. For the projected year's inventory, point sources are adjusted by growth factors based on Standard Industrial Classification codes. The growth factors are

generated using the EPA's Economic Growth Analysis System version 5.0 (E-GAS 5.0) program. Area sources are those stationary sources whose emissions are relatively small but due to the large number of these sources, the collective emissions could be significant (i.e., dry cleaners, service stations, etc.). For area sources, emissions are estimated by multiplying an emission factor by some known indicator of collective activity such as production, number of employees, or population. These types of emissions are estimated on the county level. For the projected year's inventory, area source emissions are changed by population growth, projected production growth, or when applicable, by E-GAS 5.0 growth factors. On-road mobile sources are those vehicles that travel on the roadways. For on-road mobile sources, the MOVES model results represent the new motor vehicle emission budgets for the Triangle area. Off-road mobile sources are equipment that can move but do not use the roadways (e.g., lawn mowers, construction equipment, railroad locomotives, and aircraft). With the exception of the railroad locomotives and aircraft engines, the emissions from this category are calculated using the EPA's NONROAD2008a non-road mobile model. The railroad locomotive and aircraft engine emissions are estimated by taking an activity and multiply by an emission factor. All emissions are also estimated at the county level. Total off-road mobile source emissions represent the sum of emissions generated by the NONROAD 2008a model and emissions calculated for aircraft and railroad locomotives.

Despite the small increases in emissions from the change to the RVP control, the Triangle Area continues to demonstrate a downward trend in NOx and VOC emissions through 2017. Tables 1 and 2 below provide the results of this analysis for the entire Triangle Area (including the three Counties (noted in italics) affected by the proposed RVP relaxation).

Table 1 Total Man-Made VOC Emissions *(tpd)* for the Triangle Maintenance Area

County	**2005**	**2008**	**2011**	**2014**	**2017**
Chatham*	5.52	5.57	5.23	5.00	4.85
Durham	*25.94*	*23.27*	*20.93*	*19.47*	*18.31*
Franklin	11.81	11.55	11.20	11.14	11.23
Granville	*12.78*	*12.38*	*11.98*	*11.85*	*11.90*
Johnston	30.58	29.43	28.31	27.73	27.57
Orange	15.42	14.35	13.10	12.13	11.35
Person	9.00	8.65	8.32	8.12	8.07
Wake	*87.45*	*81.34*	*75.61*	*72.33*	*69.85*
Total	**198.50**	**186.54**	**174.68**	**167.77**	**163.13**

* Emissions for Center, New Hope and Williams Townships in Chatham County only.

Table 2 Total Man-Made NOx Emissions *(tpd)* for the Triangle Maintenance Area

County	**2005**	**2008**	**2011**	**2014**	**2017**
Chatham*	5.01	4.44	3.79	3.17	2.73
Durham	*39.48*	*35.16*	*28.45*	*23.52*	*19.73*
Franklin	7.68	6.55	5.37	4.49	3.82
Granville	*10.94*	*8.98*	*7.01*	*5.56*	*4.57*
Johnston	34.22	28.94	23.19	19.32	16.47
Orange	23.37	20.64	16.53	13.52	11.31
Person	37.48	31.38	31.20	31.02	29.72
Wake	*106.52*	*98.12*	*83.82*	*69.97*	*59.06*
Total	**264.70**	**234.21**	**199.36**	**170.57**	**147.41**

* Emissions for Center, New Hope and Williams Townships in Chatham County only.

As Table 1 and 2 indicate, NOx and VOC emissions in the Triangle Area will continue to decrease, even with the increase in high ozone season fuel RVP to 9.0 psi. The slight increase in emissions is being mitigated area-wide by a steady decrease in tailpipe emissions, which is the result of cleaner new vehicle fleet replacing the older fleet and other Federal and State emissions reduction programs. As discussed below, based on this data, together with air quality data, and maintenance demonstrations and attainment designations for the NAAQS, EPA is making the preliminary determination that the slight increase in NOx and VOC emissions resulting from this change will not interfere with the Area's ability to maintain the 1997 8-hour ozone NAAQS, or any other applicable requirement. More details on the individual non-interference analyses for

the ozone, PM, NO_2 and CO NAAQS are provided below.

b. Non-interference Analysis for the Ozone NAAQS

Effective June 15, 2004, the Triangle Area was designated as nonattainment for the 1997 8-hour ozone NAAQS. The primary precursors for ozone are VOC and NOx emissions. As a previous 1-hour ozone nonattainment area, Durham and Wake Counties and a portion of Granville County in the Triangle Area were already subject to the Federal RVP requirements for high ozone season gasoline to aid the Area with compliance with the ozone NAAQS. Although originally implemented for the 1-hour ozone NAAQS, the Federal RVP requirements continued to apply to Durham and Wake Counties and a portion of Granville County for the 1997 and 2008 8-hour ozone NAAQS, and are still in effect.

On June 7, 2007, NC DENR submitted a redesignation request and maintenance plan for the 1997 8-hour ozone NAAQS. NC DENR used the MOBILE6.2 mobile source emissions model to estimate the emissions for on-road sources and NONROAD2005c non-road mobile model for off-road sources. In the years 2014 and 2017, NC DENR projected a reduction from the 2005 base year inventory of approximately 38 percent and 45 percent (respectively) in NOx emissions (in tpd). The projected reduction of VOC emissions (in tpd) for the years 2014 and 2017 is approximately 36 percent and 44 percent, respectively, from the 2005 base year emissions inventory.

There is an overall downward trend in ozone concentration in the Triangle Area that can be attributed to Federal and State programs that have led to significant emissions reductions. On December 26, 2007, (72 FR 72948), EPA approved North Carolina's 1997 8-hour ozone maintenance plan for the Triangle Area, and redesignated the Area to attainment for the 1997 8-

hour ozone NAAQS. The Triangle Area is continuing to meet the 1-hour and 1997 8-hour ozone NAAQS,[6] and is meeting the 2008 8-hour ozone NAAQS, based on recent air quality monitoring data. The 2008 ozone NAAQS is met when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 75 parts per million (ppm) or less.

As mentioned above, on December 26, 2007 (72 FR 72948), EPA approved North Carolina's June 7, 2007, maintenance plan for the Triangle Area. This maintenance plan contained MVEBs for NOx and an insignificance determination for VOC contribution from motor vehicles to the 8-hour ozone pollution in the Triangle Area. For the purposes of regional emissions analysis, the information provided by North Carolina supported EPA's determination that VOC contribution to 8-hour ozone pollution from motor vehicles in the Triangle Area as insignificant for the 1997 8-hour ozone NAAQS. Specifically, the future on-road VOC emissions were projected to be less than 10 percent in the Triangle Area, in the context of the total SIP inventory. According to information provided by North Carolina, biogenic emissions account for approximately 90 percent of the VOC emissions in future years in the Triangle Area.

In addition, North Carolina conducted a emissions sensitivity analysis that indicated that 1997 and 2008 8-hour ozone levels in the Triangle Area were not impacted by reductions in man-made VOC emissions (e.g., reductions from motor vehicles). Specifically, the photochemical model was run for a 39-day scenario in 2009 with a 30 percent reduction in all man-made VOC emissions. In addition, two mobile source specific sensitivity simulations[7] were conducted by NCDAQ over a 7-day period to specifically focus on the impact of mobile

[6] The air quality design value for the 8-hour ozone NAAQS is the 3-year average of the annual 4th highest daily maximum 8-hour ozone concentration. The level of the 2008 8-hour ozone NAAQS is 0.075 ppm. The 2008 8-hour ozone NAAQS is not met when the design value is greater than 0.075 ppm.

[7] One simulation ran a 50 percent increase in mobile source emissions in the Triangle ozone nonattainment counties and the second ran a 50 percent decrease in mobile source emissions in the counties.

source emissions on ozone formation. None of these emissions sensitivity simulations resulted in a significant response in ozone formation. This supports the State's proposal that the highway mobile VOC emissions are insignificant contributors to ozone formation.

The current design value for ozone for the Triangle Area for 2010-2012 is 0.075 ppm and the preliminary 2011-2013 design value is 0.071 ppm for this Area. EPA also evaluated the potential increase in the VOC and NOx precursor emissions, and whether it is reasonable to conclude that the requested change to RVP requirements in Durham, Granville and Wake Counties during the high ozone season would cause the Area to be out of compliance with the 2008 8-hour ozone NAAQS.

In light of the current designations, monitoring and emissions data, and the submitted modeling, including the fact that the NOx emissions inventories are projected to continue to significantly decrease,[8] EPA has preliminarily determined that North Carolina's revision of the maintenance plan to no longer rely on gasoline with 7.8 psi RVP requirement in Durham, Granville and Wake Counties will not interfere with attainment or maintenance of the ozone NAAQS. As Table 3 indicates the design value (DV) for the Triangle Area shows that the Area is meeting the NAAQS.

Table 3 Triangle Area Design Value

2004-2006 DV (ppm)	2005-2007 DV (ppm)	2006-2008 DV (ppm)	2007-2009 DV (ppm)	2008-2010 DV (ppm)	2009-2011 DV (ppm)	2010-2012 DV (ppm)
0.080	0.081	0.080	0.077	0.074	0.073	0.075

[8] Future decreases in the inventory are an order of magnitude greater than the increases associated with the change in RVP.

c. Non-interference Analysis for the PM NAAQS

The precursors for $PM_{2.5}$ are NOx, SO_2, VOC and ammonia. For the Triangle Area, on-road mobile, off-road mobile and area sources are not believed to be large contributors to directly emitted fine particulate matter less than 2.5 micrometers ($PM_{2.5}$) or indirectly formed $PM_{2.5}$ concentrations. As mentioned earlier in this rulemaking, the RVP requirements result in emissions benefits for VOC and NOx so EPA focused on these precursors for the analysis of the potential impact of North Carolina's SIP change. However, as described in North Carolina's March 27, 2013, submission, directly emitted $PM_{2.5}$ is a very small component of the overall $PM_{2.5}$ ambient concentrations. Instead, the primary species impacting $PM_{2.5}$ concentrations are the secondarily formed sulfates and organic carbons.

Sulfates are formed through the chemical reaction of SO_2 and ammonia, and the majority of the organic carbons come from natural sources like trees. *See* "Redesignation Demonstration and Maintenance Plan for the Hickory (Catawba County) and Greensboro/Winston-Salem/High Point (Davidson and Guilford Counties) Fine Particulate Matter Nonattainment Areas", submitted to EPA on 18 December 2009, Figure 4-2, p. 4-4, which can be accessed at www.regulations.gov using docket ID No. EPA-R04-OAR-2009-1010. A 2009 analysis of SO_2 emissions, which is a primary contributor to the formation of $PM_{2.5}$ within North Carolina, found about 3.3 percent of total SO_2 emissions came from on-road, off-road and area sources combined, while the remaining 96.7 percent came from point sources.

On July 18, 1997 (62 FR 38652), EPA established an annual $PM_{2.5}$ NAAQS at 15.0 micrograms per cubic meter ($\mu g/m^3$) based on a 3-year average of annual mean $PM_{2.5}$ concentrations. At that time, EPA also established a 24-hour NAAQS of 65 $\mu g/m^3$. *See* 40 CFR 50.7. On October 17, 2006 (71 FR 61144), EPA retained the 1997 annual $PM_{2.5}$ NAAQS at 15.0

μg/m^3 based on a 3-year average of annual mean $PM_{2.5}$ concentrations, and promulgated a new 24-hour NAAQS of 35 μg/m^3 based on a 3-year average of the 98th percentile of 24-hour concentrations. On January 15, 2013 (78 FR 3086), EPA established an annual primary $PM_{2.5}$ NAAQS at 12.0 μg/m^3 based on a 3-year average of annual mean $PM_{2.5}$ concentrations. At that time, EPA retained the 2006 24-hour NAAQS at 35 μg/m^3 based on a 3-year average of the 98th percentile of 24-hour concentrations.

On January 5, 2005 (70 FR 944), all counties in the Triangle Area were designated unclassifiable/attainment for the 1997 annual $PM_{2.5}$ standard, and on November 13, 2009 (74 FR 58688), all counties in the Triangle Area were designated unclassifiable/attainment for the 2006 24-hour $PM_{2.5}$ standard. As Table 4 indicates the $PM_{2.5}$ annual and 24-hour design values demonstrate attainment of the respective NAAQS and those for the annual standard have been decreasing.

Table 4 $PM_{2.5}$ Design Values

Year	2008-2010	2009-2011	2010-2012
Annual Standard			
Design Value	10.4	9.8	10.0
24-hour Standard			
Design Value	22	22	22

In light of the fact that a change to the NC Maintenance Plan to no longer rely on gasoline with a 7.8 psi RVP requirement will only result in a slight increase in VOC and NOx emissions, EPA has preliminarily determined that a change to the Federal RVP requirement for Durham, Granville and Wake Counties would not interfere with the Triangle Area maintaining the 1997 $PM_{2.5}$ annual or the 2006 24-hour $PM_{2.5}$ standards.

d. Non-interference Analysis for the 2010 NO_2 NAAQS

On February 17, 2012 (77 FR 9532), EPA finalized designations for 2010 NO_2 NAAQS. Counties in North Carolina, including those in the Triangle Area, were designated unclassifiable/attainment for the 2010 NO_2 NAAQS. Based on North Carolina's March 27, 2013, SIP revision, EPA has evaluated the potential increase in the NOx emissions (approximately a quarter of a ton per day between June 1st and September 15th) and whether it is reasonable to believe that North Carolina's requested change for its high ozone season RVP requirement would cause the Area to be out of compliance with the 2010 NO_2 NAAQS. The slight increase in NOx emissions is being mitigated by a steady decrease in tailpipe emissions,[9] which is the result of cleaner new vehicle fleet replacing the older fleet. See table 2 above.

In light of the current designation, monitoring and emissions trend data and the submitted modeling, including the fact that NOx emissions inventories are projected to continue to significantly decrease, EPA has preliminarily determined that a change to the Federal RVP requirements for the Triangle Area would not interfere with the continued decline in NOx emissions, nor with attainment or maintenance of the 2010 NO_2 NAAQS.

e. Non-interference Analysis for the CO NAAQS

Durham and Wake Counties in the Triangle Area were previously designated nonattainment for the 8-hour CO NAAQS. *See* 56 FR 56694, November 6, 1991. Subsequently, Durham and Wake Counties attained the 8-hour CO NAAQS and was redesignated from nonattainment to attainment. On August 2, 1995, EPA redesignated Durham and Wake Counties to attainment for the 8-hour CO NAAQS based on the measured air quality data and the 10-year

[9] See table 2 above.

maintenance plan submitted. *See* 60 FR 39258. The 8-hour CO NAAQS is 9 ppm and the 1-hour CO NAAQS is 35 ppm. Monitoring data from 2009-2012 shows Wake County is well below the 8-hour CO NAAQS values as listed in Table 5.

Table 5 CO 8-Hour Monitored Concentration NAAQS (ppm)

County	Monitor ID	2009	2010	2011	2012
8-hr NAAQS					
Wake	371830014	1.3	1.3	1.4	1.3
1-hr NAAQS					
Wake	371830014	2.1	2.1	1.8	1.9

Based upon the revised modeling associated with the proposed relaxation of the RVP standard in the three portions of the Triangle Area currently subject to the more stringent standard, it is estimated that Triangle Area on-road CO emissions will increase approximately 6.3 tons per day in 2014 and 2017. This projected increase represents an increase in the total inventory of less than 1 percent.

Table 6 2010 CO Emissions (tons/day) for Maintenance Areas

County	**Point Source**	**Area Source**	**On-Road**	**Non-road**	**Total**
Raleigh-Durham Maintenance Area					
Durham	0.97	1.54	186.00	19.04	207.55
Wake	1.17	4.26	642.97	70.62	719.02
Total	**2.14**	**5.80**	**828.97**	**89.66**	**926.57**

In light of the slight increase in CO emissions, and the existing air quality data showing a wide margin of compliance with the CO NAAQS, EPA has preliminarily determined that a change to the Federal RVP requirement for Durham, Granville and Wake Counties would not interfere with the Raleigh-Durham Area maintaining the CO standards. As Table 5 above

indicates the CO design value is well below the standard.

VI. Mobile Source Inventories and Motor Vehicle Emission Budgets Update.

a. Background

On June 7, 2007, the State of North Carolina, through NC DENR, submitted a final request for EPA to: (1) Redesignate the Triangle Area to attainment for the 1997 8-hour ozone standard; and (2) approve a North Carolina SIP revision containing a maintenance plan for the Triangle Area. On December 26, 2007 (72 FR 72948), EPA approved the redesignation request for the Triangle Area. Additionally, EPA approved the 1997 8-hour ozone maintenance plan including NOx MVEBs for the Triangle Area.[10] These approvals were based on EPA's determination that the State of North Carolina had demonstrated that the Triangle Area met the criteria for redesignation to attainment specified in the CAA, including the determination that the entire Triangle Area had attained the 1997 8-hour ozone NAAQS.

At the time of original redesignation request, the on-road motor vehicle inventory was generating by the MOBILE6.2 model, which at the time was the current MVEB model. The proposed change to the maintenance plan discussed above includes a MVEB generated by the MOVES model which has since replaced MOBILE6.2 model. In addition, the model used to calculate the original non-road inventory (NONROAD2005c) has also since been updated by a new non-road inventory model (NONROAD2008a).

[10] In the December 26, 2007 final rule EPA also approved NC DENR's determination that on-road emissions of VOCs are insignificant for transportation conformity purposes. We are not addressing that insignificance finding in today's proposal.

As a result of these new models and the revised emission associated with a relaxed RVP standard, the safety margin[11] calculations provided in the revised maintenance plan have changes from the previous margins included with the original maintenance plan. Therefore, North Carolina's revision includes a reallocation of the safety margin to the NOx MVEB based upon the revised calculations. EPA's preliminary analysis of these changes is described below.

b. On-road Inventory

As discussed above, the on-road motor vehicle emissions in the revised maintenance plan are calculated using the MOVES model. The MOVES model uses the road class vehicle miles traveled (VMT) and other operating conditions as input parameters to generate an output file that contains estimated emissions. For the projected years inventories, the on-road mobile sources emissions are calculated by running the MOVES mobile model for the future year with the projected VMT to generate emissions that take into consideration expected Federal tailpipe standards, fleet turnover and new fuel standards.

Table 7 shows the on-road Chatham, Franklin, Johnston, Orange and Person Counties emissions based on the current RVP of 9.0 psi and the on-road Wake, Durham, and Granville Counties emissions based on the current RVP of 7.8 psi. Table 8 shows the on-road emissions data for Durham, Granville and Wake Counties for 2005, 2008 and 2011 based on 7.8 psi and the comparison of the projected 2014 and 2017 emissions based on a RVP relaxation to 9.0 psi for the three counties.

[11] A safety margin is the difference between the attainment level of emissions from all source categories (i.e., point, area, and mobile) and the projected level of emissions from all source categories. The State may choose to allocate some of the safety margin to the MVEBs, for transportation conformity purposes, so long as the total level of emissions from all source categories remains equal to or less than the attainment level of emissions. (40 CFR 93.124(a))

Table 7 MOVES On-Road Emissions for the Triangle Area*

	2005	2008	2011	2014	2017
VOC Emissions (tons/day)					
MOVES	87.66	74.10	59.13	48.22	38.97
NOx Emissions (tons/day)					
MOVES	175.18	152.05	117.46	91.84	72.88

* Wake, Durham, and Granville Counties emissions based on the current RVP of 7.8 psi.

Table 8 MOVES On-Road Emissions Comparison*

	2005	2008	2011	**2014****	**2017****
VOC Emissions (tons/day)					
MOVES	57.69	49.01	39.21	**31.90/32.94**	**25.64/26.44**
NOx Emissions (tons/day)					
MOVES	116.11	102.92	80.09	**62.56/62.99**	**49.48/49.78**

* Emissions data for Durham, Granville and Wake Counties only.
** Wake, Durham, and Granville Counties emissions based on relaxation of RVP of 7.8 psi to 9.0 psi.

c. Non-road Inventory

In the original 2007 redesignation demonstration and maintenance plan, the model used to generate off-road emissions was the NONROAD2005c model. Since 2007, EPA has updated the non-road model to NONROAD2008a. NONROAD2008a is the latest USEPA approved non-road model. In this revision, the NONROAD2008a model is used to generate non-road emissions for all inventory years – 2005, 2008, 2011, 2014, and 2017. Also, the non-road emissions documentation includes the general conformity analysis for two new nuclear generating units at Duke-Progress Energy Company in Wake County.

d. Motor Vehicle Emissions Budgets

In the March 27, 2013, SIP revision, North Carolina provided an increase for the amount of safety margins allocated to the NOx MVEBs to account for changes in the projection models. The MVEBs in this SIP revision which EPA is proposing to approve update the MVEBs which were originally approved by EPA on December 26, 2007. The updated MVEBs are outlined in table 9 below.

NC DENR is currently allocating portions of the available safety margin to the MVEBs to allow for unanticipated VMT growth as well as changes to future vehicle mix assumptions that influence the emission estimations. In the March 2013 SIP revision, North Carolina is seeking to adjust the safety margins. The following tables provide the adjusted NOx MVEBs, in kilograms per day (kg/d) for the 2008 base attainment year inventories, as well as the projected NOx emissions inventory 2017 for each County.

Table 9 Triangle Area (County Level) NOx MVEB in Kilograms per day

County		2008 NOx (kg/d)	2017 NOx (kg/d)
Chatham*	Base Emissions	3,033	1,690
	Safety Margin	455	422
	NOx Conformity MVEB	**3,488**	**2,112**
Durham	Base Emissions	22,438	10,509
	Safety Margin	2,244	2,101
	NOx Conformity MVEB	**24,682**	**12,610**
Franklin	Base Emissions	4,537	2,204
	Safety Margin	454	441
	NOx Conformity MVEB	**4,991**	**2,645**
Granville	Base Emissions	6,105	2,622
	Safety Margin	916	656
	NOx Conformity MVEB	**7,021**	**3,278**
Johnston	Base Emissions	20,320	9,865
	Safety Margin	2,032	1,972
	NOx Conformity MVEB	**22,352**	**11,838**
Orange	Base Emissions	13,820	6,137
	Safety Margin	1,382	1,227

	NOx Conformity MVEB	**15,202**	**7,364**
Person	Base Emissions	2,871	1,340
	Safety Margin	431	335
	NOx Conformity MVEB	3,302	1,674
Wake	Base Emissions	64,825	32,034
	Safety Margin	6,483	6,407
	NOx Conformity MVEB	**71,308**	**38,441**
Total	**New Safety Margin**	**14,396**	**13,563**

* Chatham County emissions for maintenance area only

A total of 14,396 kg (15.87 tpd) and 13,563 kg (14.95 tpd) from the available NOx safety margins in 2008 and 2017, respectively, were added to the MVEBs for the Triangle Area. As demonstrated above, the Triangle Area is projected to steadily decrease its total NOx emissions from the base year of 2005 to the maintenance year of 2017. This NOx emission decrease demonstrates continued attainment/maintenance of the 1997 8-hour ozone NAAQS for ten years from 2007 (the year the Area was effectively designated attainment for the 1997 8-hour ozone NAAQS) as required by the CAA.

VII. Proposed Action

EPA is proposing to approve the State of North Carolina's March 27, 2013, revision to its Maintenance Plan for the Triangle 1997 8-hour Ozone Maintenance Area. Specifically, EPA is proposing to approve the State's showing that the Triangle Area can continue to maintain the 1997 ozone standard without emissions reductions associated with the use of 7.8 psi RVP gasoline in the three portions of the Triangle Area currently subject to the 7.8 psi RVP standard during the high ozone season – June 1 through September 15.

EPA proposes to approve the revised and updated modeling submitted by the State, which shows that the Triangle Area can continue to maintain the 1997 ozone standard if the

applicable RVP standard in the three portions of the Triangle Area, the North Carolina revision is changed. EPA is also proposing to approve the revised NOx MVEBs for 2008 and 2017 including the revised and reallocated safety margin among the NOx MVEBs for the Triangle Area.

EPA has preliminarily determined that North Carolina's March 27, 2013, SIP revision, including the technical demonstration associated with the State's request for the removal of the Federal RVP requirements, and the updated MVEBs are consistent with the applicable provisions of the CAA. Should EPA decide to remove the subject portions of the Triangle Area from those areas subject to the 7.8 psi Federal RVP requirements, such action will occur in a separate, subsequent rulemaking.

VIII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submittal that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, October 7, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Lead, Reporting and recordkeeping requirements.

Authority: 42 U.S.C. 7401 *et seq*.

Dated: October 21, 2013.

Beverly H. Banister,

Acting Regional Administrator,

Region 4.

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