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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2015-0260; FRL- 9928-12—Region 4]

Approval and Promulgation of Implementation Plans; North Carolina: Non-interference Demonstration for Federal Low-Reid Vapor Pressure Requirement for the Gaston and Mecklenburg Counties in North Carolina

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve the State of North Carolina's April 16, 2015, revision to its State Implementation Plan (SIP), submitted through the North Carolina Department of Environment and Natural Resources, Division of Air Quality (DAQ), in support of the State's request that EPA change the Federal Reid Vapor Pressure (RVP) requirements for Gaston and Mecklenburg Counties. This RVP-related SIP revision evaluates whether changing the Federal RVP requirements in these counties would interfere with the requirements of the Clean Air Act (CAA or Act). North Carolina's April 16, 2015, RVP-related SIP revision also updates the State's maintenance plan and the associated motor vehicle emissions budgets (MVEBs) related to its redesignation request for the North Carolina portion of the Charlotte-Gastonia-Salisbury 2008 8-hour ozone nonattainment area (Charlotte 2008 Ozone Area) to reflect the requested change in the Federal RVP requirements. EPA is also proposing to approve these updates to the maintenance plan and associated MVEBs.

EPA has preliminarily determined that North Carolina's April 16, 2015, RVP-related SIP revision is consistent with the applicable provisions of the CAA.

DATES: Written comments must be received on or before [insert date 21 days after date of publication in the Federal Register].

ADDRESSES: Submit your comments, identified by Docket ID Number EPA-R04-OAR-2015-0260 by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: R4-ARMS@epa.gov.
3. Fax: (404) 562-9019.
4. Mail: EPA-R04-OAR-2015-0260, Air Regulatory Managment Section (formerly the Regulatory Development Section), Air Planning and Implementation Branch (formerly 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.
5. Hand Delivery or Courier: Ms. Lynorae Benjamin, Chief, Air Regulatory Management Section, Air Planning and Implementation 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 a.m. to 4:30 p.m., excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R04-OAR-2015-0260. 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 information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm.

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 Air Regulatory Management Section, Air Planning and Implementation

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 a.m. to 4:30 p.m., excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Richard Wong of the Air Regulatory Management Section, in the Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Mr. Wong may be reached by phone at (404) 562-8726 or via electronic mail at wong.richard@epa.gov.

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I. What is Being Proposed?

This rulemaking proposes to approve North Carolina's April 16, 2015, SIP revision in support of the State's request that EPA relax the Federal RVP requirement from 7.8 pounds per square inch (psi) to 9.0 psi for gasoline sold between June 1 and September 15 of each year (i.e., during high ozone season) in Gaston and Mecklenburg Counties. Specifically, EPA is proposing to approve the State's technical demonstration that changing the federal RVP requirements in Gaston and Mecklenburg Counties from 7.8 psi to 9.0 psi will not interfere with attainment or maintenance of any national ambient air quality standards (NAAQS) or with any other applicable requirement of the CAA.[1] In a separate SIP revision which is currently under EPA review, DAQ is requesting that EPA redesignate the North Carolina portion of the Charlotte 2008 8-hour Ozone Area to attainment.[2] Final action to approve North Carolina's requested change to the Federal RVP requirement for Gaston and Mecklenburg Counties is contingent, in part, on EPA's final action to approve North Carolina's redesignation request for the North Carolina portion of the Charlotte 2008 8-hour Ozone Area. With its redesignation request, the State included a maintenance demonstration plan that estimates emissions through 2026 using a 7.8 psi RVP requirement rather than the 9.0 psi RVP requirement. However, through the April 16, 2015 RVP-related SIP revision (the subject of this proposed rulemaking), DAQ updated the mobile emissions for that maintenance plan (including the MVEBs) to reflect the State's request for EPA to change the Federal RVP requirement for Gaston and Mecklenburg Counties to 9.0 psi. The updates are summarized on page 24 of the State's submittal titled "Charlotte 2008 Ozone Redesignation and Maintenance SIP_with_RVP_Demo_Final_04-16-15", and may be accessed

[1] A separate rulemaking is required for relaxation of the current requirement to use gasoline with an RVP of 7.8 psi in these counties. This action proposes EPA's evaluation of the approvability of North Carolina's noninterference demonstration pursuant to section 110(l). The decision regarding removal of Federal RVP requirements pursuant to section 211(h) in the Area includes other considerations evaluated at the discretion of the Administrator. As such, the determination regarding whether to remove the Area from those areas subject to the section 211(h) requirements is made through a separate rulemaking action.

[2] See footnote 4 for a geographic description of the Charlotte 2008 8-hour Ozone Area.

at www.regulations.gov using Docket ID No. EPA-R04-OAR-2015-0260. This proposed action would also update that maintenance plan to reflect the change for mobile emissions and the associated MVEBs due to the proposed change in the Federal RVP requirements for Gaston and Mecklenburg Counties.

As mentioned above, North Carolina is requesting the removal of the Federal 7.8 psi RVP requirement for Gaston and Mecklenburg Counties and, as part of that request, has evaluated whether removal of this requirement would interfere with attainment or maintenance of the NAAQS. To make this demonstration, North Carolina completed a technical analysis to estimate the change in emissions that would result from a switch to 9.0 psi RVP fuel. EPA has reviewed this technical analysis and is proposing to find that North Carolina's technical demonstration supports the conclusion that the use of gasoline with an RVP of 9.0 psi in Gaston and Mecklenburg Counties will not interfere with attainment or maintenance of any NAAQS or with any other applicable requirement of the CAA in the Charlotte Area.[3] In addition to proposing to approve DAQ's noninterference demonstration, EPA is also proposing to approve the update to the maintenance plan and MVEBs associated with the State's request to redesignate the North Carolina portion of the Charlotte 2008 8-hour Ozone Area to reflect the requested change in the Federal RVP requirements for Gaston and Mecklenburg Counties.

This preamble is hereinafter organized into five parts. Section II provides the background of the Charlotte 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

[3] The use of the term "Charlotte Area" in the remainder of this document refers to the EPA-designated area for the relevant NAAQS that includes Gaston and Mecklenburg Counties.

analysis of the information submitted by North Carolina to support a change to the Federal RVP standard in Gaston and Mecklenburg Counties.

II. What is the Background of the Charlotte Area?

The Charlotte Area was originally designated as a 1-hour ozone nonattainment area by EPA on March 3, 1978 (43 FR 8962) and was geographically defined as Mecklenburg County, North Carolina. On November 6, 1991, by operation of law under section 181(a) of the CAA, EPA classified the Charlotte Area as a moderate nonattainment area for ozone and added Gaston County to the nonattainment area. *See* 56 FR 56693. 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 section III, below, a 7.8 psi Federal RVP requirement first applied to Gaston and Mecklenburg Counties during the high ozone season given its status as a nonattainment area for the 1-hour ozone standard.

DAQ requested a redesignation of the Charlotte Area to attainment for the 1-hour ozone NAAQS in 1993. The Area attained the 1-hour ozone NAAQS and was redesignated to attainment for the 1-hour ozone on July 5, 1995, based on 1990-1993 ambient air quality monitoring data. *See* 60 FR 34859. North Carolina's 1-hour ozone redesignation request did not include a request to relax the 7.8 psi Federal RVP standard.

On April 30, 2004, EPA designated and classified areas for the 1997 8-hour ozone NAAQS that was promulgated on July 18, 1997, as unclassifiable/attainment or nonattainment for the new 8-hour ozone NAAQS. *See* 69 FR 23857. The Charlotte Area was designated as nonattainment for the 1997 8-hour ozone NAAQS with a design value of 0.100 parts per million

(ppm).[4] Subsequently, the Charlotte Area attained the 1997 8-hour ozone NAAQS with a design value of 0.082 ppm using three years of quality assured data for the years of 2008-2010. The Charlotte Area was redesignated to attainment for the 1997 8-hour ozone NAAQS in a final rulemaking on December 2, 2013. *See* 78 FR 72036. North Carolina's 1997 8-hour ozone redesignation request did not include a request for the removal of the 7.8 psi Federal RVP standard for the Charlotte Area, and thus modeled 7.8 psi for Gaston and Mecklenburg Counties to support the maintenance demonstration.

On May 21, 2012, EPA designated and classified areas for the 2008 8-hour ozone NAAQS that was promulgated on March 27, 2008, as unclassifiable/attainment or nonattainment for the new 8-hour ozone NAAQS. *See* 77 FR 30088. The Charlotte Area was designated as nonattainment for the 2008 8-hour ozone NAAQS with a design value of 0.079 ppm.[5] On April 16, 2015, DAQ submitted a redesignation request and maintenance plan for the North Carolina portion of the Charlotte 2008 8-hour Ozone Area for EPA's approval. In that submittal, the State included a maintenance demonstration that estimates emissions using a 7.8 psi RVP requirement for Gaston and Mecklenburg Counties for the 2008 8-hour ozone redesignation request and

[4] The nonattainment area for the 1997 8-hour ozone standard consists of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan, Union and a portion of Iredell County (Davidson and Coddle Creek Townships), North Carolina and a portion of York County, South Carolina. The 7.8 psi RVP standard continued to apply to Gaston and Mecklenburg counties whereas the remaining counties in the nonattainment area are subject to the 9.0 psi RVP standard.

[5] The nonattainment area for the 2008 8-hour ozone standard includes the same counties in the nonattainment area for the 1997 8-hour ozone standard, but it has a smaller geographical boundary than the 1997 8-hour ozone nonattainment area. The 2008 8-hour ozone nonattainment area includes the entire county of Mecklenburg and portions of the following counties: Cabarrus (Central Cabarrus, Concord, Georgeville, Harrisburg, Kannapolis, Midland, Mount Pleasant, Odell, Poplar Tent, New Gilead and Rimertown Townships), Gaston (Dallas, Crowders Mountain, Gastonia, Riverbend and South Point Townships), Iredell (Coddle and Davidson Townships), Lincoln (Catawba Springs, Lincolnton and Ironton Townships), Rowan (Atwell, China Grove, Franklin, Gold Hill, Litaker, Locke, Providence, Salisbury, Steele and Unity Townships) and Union (Goose Creek, Marshville, Monroe, Sandy Ridge and Vance Townships) for North Carolina, and a portion of York County (excluding the Indian Country associated with the Catawba Indian Nation) for South Carolina. Though the number of counties remained the same for the 2008 ozone nonattainment area, Gaston and Mecklenburg adhered the 7.8 psi RVP requirement while remaining counties were subjected to the RVP of 9.0 psi.

maintenance plan. EPA is taking action on the aforementioned redesignation request and maintenance plan in a separate rulemaking. However, also on April 16, 2015, to support its request for EPA to change the Federal RVP requirement for Gaston and Mecklenburg Counties, DAQ submitted a SIP revision that contains a noninterference demonstration that included updated modeling assuming 9.0 psi for RVP for Gaston and Mecklenburg Counties and updates the maintenance plan submission and associated MVEBs for the North Carolina portion of the Charlotte 2008 8-hour Ozone Area.

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 (VOCs), 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 summer ozone control 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 EPA 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). A current listing of the RVP requirements for states can be found at 40 CFR 80.27(a)(2) as well as on EPA's website at: http://www.epa.gov/otaq/fuels/gasolinefuels/volatility/standards.htm.

As explained in the December 12, 1991 (56 FR 64704), Phase II rulemaking, EPA believes that relaxation of an applicable RVP standard 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 change the volatility standard unless the state requests a change 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, North Carolina did not request a change of the applicable 7.8 psi Federal RVP standard when the Charlotte Area was redesignated to attainment for the either the 1-hour or the 1997 8-hour ozone NAAQS. The State, in conjunction with its request to redesignate the North Carolina portion of the Charlotte 2008 8-hour Ozone Area to attainment,[6] is now requesting a change of the Federal RVP requirement from 7.8 psi to 9.0 psi. EPA's consideration of this requested change for the Federal RVP requirements for Gaston and Mecklenburg Counties is contingent, in part, upon EPA approving North Carolina's redesignation request and maintenance plan for the North Carolina portion of the Charlotte 2008 8-hour Ozone Area. To make the requested change in the Federal RVP requirements for Gaston and Mecklenburg Counties, EPA would also have to approve the updates to North Carolina's maintenance plan and MVEBs included with the State's April 16, 2015, RVP-related SIP revision.[7]

[6] See footnote 4 for a geographic description of the Charlotte NC 2008 8-hour Ozone Area.

[7] The maintenance plan has to ensure maintenance of the 0.075 ppm 2008 8-hour ozone NAAQS which is more stringent than the 0.080 ppm 1997 8-hour ozone NAAQS.

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

To support North Carolina's request to relax the Federal RVP requirement for Gaston and Mecklenburg Counties, the State must demonstrate that the requested change will satisfy section 110(l) of the CAA. Section 110(l) requires that a revision to the SIP not interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of the Act. EPA's criterion for determining the approvability of North Carolina's April 16, 2015, RVP-related SIP revision is whether the noninterference demonstration associated with the relaxation request satisfies section 110(l).

EPA evaluates each section 110(l) noninterference demonstration on a case-by-case basis considering 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 degree of analysis focused on any particular NAAQS in a noninterference demonstration varies depending on the nature of the emissions associated with the proposed SIP revision. EPA's analysis of North Carolina's April 16, 2015, SIP revision pursuant to section 110(l) is provided below.

As previously mentioned, EPA is proposing three actions in relation to the State's April 16, 2015, noninterference demonstration. First, EPA is proposing to approve North Carolina's update to the maintenance plan associated with the State's redesignation request for the North Carolina portion of the Charlotte 2008 8-hour Ozone Area to reflect modeling of 9.0 psi for RVP for Gaston and Mecklenburg Counties. Second, EPA is proposing to approve the revised MVEBs that result from the updated mobile modeling to reflect the change in RVP for Gaston and Mecklenburg Counties. Third, EPA is proposing to approve the State's technical

demonstration that the switch to the sale of gasoline with an RVP of 9.0 psi in Gaston and Mecklenburg Counties during the high ozone season will not interfere with attainment or maintenance of the NAAQS and to amend the SIP to include this demonstration. Consistent with CAA section 211(h) and the Phase II volatility regulations, a separate rulemaking is required to change the current Federal requirement to use gasoline with a 7.8 psi RVP in Gaston and Mecklenburg Counties.

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

a. Overall Preliminary Conclusions Regarding North Carolina's Noninterference Analyses

On April 16, 2015, DAQ submitted a noninterference demonstration to support the State's request to modify the RVP summertime gasoline requirement from 7.8 psi to 9.0 psi for Gaston and Mecklenburg Counties. This demonstration includes an evaluation of the impact that the removal of the 7.8 psi RVP requirement for these counties would have on the Area's ability to attain or maintain the 1997 and 2008 ozone standards or other NAAQS in the Charlotte Area.[8] North Carolina's noninterference analysis evaluated the impact of the change in RVP on the Area's ability to attain or maintain the ozone, particulate matter (PM),[9] Nitrogen Dioxide (NO_2), sulfur dioxide (SO_2), and carbon monoxide (CO) NAAQS.

DAQ's noninterference analysis utilized EPA's 2014 Motor Vehicle Emissions Simulator (MOVES) emission modeling system to estimate emissions for mobile sources. These mobile source emissions are used as part of the evaluation of the potential impacts to the NAAQS that

[8] The six NAAQS for which EPA establishes health and welfare based standards are CO, lead, NO_2, ozone, PM, and SO_2. RVP requirements do not have an impact on actual or modeled lead emissions.
[9] PM is composed of $PM_{2.5}$ and PM_{10}.

might result exclusively from changing the high ozone season RVP requirement from 7.8 psi to 9.0 psi. As summarized in Tables 1 and 2, below, the MOVES model predicted minor increases in on-road mobile source NOx and VOC emissions in the North Carolina portion of the Charlotte 2008 8-hour Ozone Area due to relaxation of the RVP requirement. Daily on-road mobile NOx emissions are projected to increase by 0.11 ton in 2015 down to an increase of 0.01 ton in 2026 during the ozone season. Daily on-road mobile VOC emissions are projected to increase by 0.18 ton in 2015 down to an increase of 0.04 ton in 2026 during the ozone season.

Table 1 – On-road Mobile Source NOx Emissions (average tons/day) for ozone season

	7.8 psi RVP				
County	**2014**	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	6.60	5.93	3.94	2.79	1.86
Gaston[1,2]	8.11	7.23	4.60	3.04	1.97
Iredell[1]	3.36	3.05	2.05	1.41	0.93
Lincoln[1]	3.00	2.75	1.84	1.23	0.76
Mecklenburg[2]	26.99	24.12	14.35	9.63	6.85
Rowan[1]	6.42	5.75	3.73	2.56	1.59
Union[1]	5.67	5.14	3.41	2.28	1.51
Total	60.15	53.97	33.92	22.94	15.47
	9.0 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	-	5.93	3.94	2.79	1.86
Gaston[1,2]	-	7.26	4.62	3.04	1.98
Iredell[1]	-	3.05	2.05	1.41	0.93
Lincoln[1]	-	2.75	1.84	1.23	0.76
Mecklenburg[2]	-	24.20	14.39	9.65	6.85
Rowan[1]	-	5.75	3.73	2.56	1.59
Union[1]	-	5.14	3.41	2.28	1.51
Total	-	54.08	33.98	22.96	15.48
Emissions Increase	-	0.11	0.06	0.02	0.01

[1] Emissions are reported only for the nonattainment portion of the county included in the Charlotte NC 2008 8-hour Ozone Area.

[2] Only Gaston and Mecklenburg counties use 7.8 psi RVP fuel. The remaining counties use 9.0 psi RVP fuel.

Table 2 – On-road Mobile Source VOC Emissions (average tons/day) for ozone season

	7.8 psi RVP				
County	**2014**	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	4.15	3.89	3.01	2.53	2.04
Gaston[1,2]	4.61	4.24	3.05	2.31	1.72
Iredell[1]	1.95	1.82	1.40	1.10	0.82
Lincoln[1]	1.91	1.81	1.37	1.07	0.79
Mecklenburg[2]	14.40	13.28	10.00	8.18	6.64
Rowan[1]	3.76	3.48	2.57	1.93	1.41
Union[1]	3.54	3.30	2.54	2.04	1.56
Total	34.32	31.82	23.94	19.16	14.98
	9.0 psi RVP				
	2014	**2015**	**2018**	**2022**	**2026**
Cabarrus[1]	-	3.89	3.01	2.53	2.04
Gaston[1,2]	-	4.29	3.08	2.32	1.73
Iredell[1]	-	1.82	1.40	1.10	0.82
Lincoln[1]	-	1.81	1.37	1.07	0.79
Mecklenburg[2]	-	13.41	10.09	8.22	6.67
Rowan[1]	-	3.48	2.57	1.93	1.41
Union[1]	-	3.30	2.54	2.04	1.56
Total	-	32.00	24.06	19.21	15.02
Emissions Increase	-	0.18	0.12	0.05	0.04

[1] Emissions are reported only for the nonattainment portion of the county included in the Charlotte NC 2008 8-hour Ozone Area.

[2] Only Gaston and Mecklenburg counties use 7.8 psi RVP fuel. The remaining counties use 9.0 psi RVP fuel.

Table 3, below, shows the total estimated anthropogenic emissions of NOx and VOC from area, point, on-road, and nonroad source categories for the North Carolina Portion of the Charlotte 2008 8-hour Ozone Area. Emissions reported for 2014 assume the use of 7.8 psi RVP fuel for Gaston and Mecklenburg Counties whereas emissions from 2015 through 2026 assume the use of 9.0 psi RVP fuel. NOx and VOC emissions are projected to continue to decrease in the Charlotte 8-hour Ozone Area using 9.0 psi RVP fuel in the entire Area for years 2015 through 2026. DAQ's analysis also estimates that RVP relaxation could increase anthropogenic

VOC emissions by 0.42 tpd in 2015 and 0.32 tpd in 2026 and could increase anthropogenic NOx emissions by 0.11 tpd in 2015 and 0.01 tpd in 2026.

Table 3 – Total Anthropogenic Emissions

Year	NOx (tons/day)	VOC (tons/day)
2014	130.18	113.12
2015	124.18	111.09
2018	94.33	104.41
2022	86.67	101.74
2026	67.54	100.46
Difference from 2014 to 2026	-62.64	-12.66

b. Noninterference Analysis for the Ozone NAAQS

As discussed above, the Charlotte Area is currently designated as attainment for the 1997 8-hour ozone NAAQS, and in a separate action, EPA is considering the State's redesignation request for the 2008 8-hour ozone NAAQS. Although the Charlotte Area was previously designated as nonattainment for the 1997 8-hour ozone NAAQS, the Charlotte Area was redesignated to attainment for that NAAQS on December 2, 2014. *See* 78 FR 72036.

Table 4, below, shows the safety margins[10] from a 2014 base year with 7.8 psi RVP fuel to the years 2015, 2018, 2022, and 2026 with 9.0 psi RVP fuel for the entire Charlotte 2008 8-hour Ozone Area. The safety margins identified in Table 4 indicate that the switch to 9.0 psi

[10] The safety margin is the difference between the attainment level of emissions in the base year from all source categories (point, area, on-road and nonroad) and the projected level of emissions in future years from all source categories.

RVP fuel in Gaston and Mecklenburg Counties will not interfere with the Area's ability to attain or maintain the 2008 8-hour ozone NAAQS.[11]

Table 4 – Safety Margin

Year	NOx (tons/day)	VOC (tons/day)
2014	N/A	N/A
2015	-6.00	-2.03
2018	-35.85	-8.71
2022	-43.51	-11.38
2026	-62.64	-12.66

Because the 2008 8-hour ozone NAAQS is more stringent than the 1997 8-hour ozone standard, North Carolina's April 16, 2015, noninterference demonstration for the ozone NAAQS is focused on the 2008 8-hour ozone standard. The 2008 8-hour ozone NAAQS is met when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 0.075 ppm or less. As shown in Table 5, all of the ozone monitors in the Charlotte 2008 8-hour Ozone Area are currently below the 2008 8-hour ozone standard.

Table 5 – Charlotte Area Ozone Design Values (ppm)

Monitor	2007-	2008-	2009-	2010-	2011-	2012-

[11] The Charlotte Area is located within a NOx-limited region. A NOx-limited region is one in which the concentration of ozone is limited by the amount of NOx emissions. NOx and VOC are precursors to the formation of ozone in the atmosphere. In a NOx-limited area, high prevailing concentrations of VOC from naturally-occurring sources are present in the atmosphere to contribute to ozone formation. Consequently, reduction of manmade, or anthropogenic, sources of VOC emissions generally do not result in reduced ozone formation. Instead, reductions of NOx emissions provide a more effective ozone reduction strategy because reduced emissions of manmade NOx emissions limit the amount of NOx available in the atmosphere for ozone formation. *See, e.g.*, The State of the Southern Oxidants Study (SOS) Policy Relevant Findings in Ozone and $PM_{2.5}$ Pollution Research 1995-2003 (June 30, 2004), http://www.ncsu.edu/sos/pubs/sos3/State_of_SOS_3.pdf.

	2009	2010	2011	2012	2013	2014
Crouse	0.076	0.072	0.071	0.075	0.072	0.068
Garinger	0.082	0.078	0.079	0.083	0.078	0.070
Arrowood	0.076	0.073	0.076	0.077	0.072	0.066
County Line	0.086	0.082	0.078	0.083	0.078	0.073
Rockwell	0.083	0.077	0.075	0.078	0.073	0.068
Enochville	0.083	0.077	0.076	0.077	0.072	-------[12]
Monroe	0.076	0.072	0.070	0.073	0.070	0.068
York	0.072	0.067	0.064	0.065	0.063	0.060

Table 5 also shows that there is an overall downward trend in ozone concentrations in the Charlotte 2008 8-hour Ozone Area. This decline can be attributed to Federal and State programs that have led to significant emissions reductions in ozone precursors. Given this downward trend, the current ozone concentrations in the Charlotte 2008 8-hour Ozone Area, and the results of North Carolina's emissions analysis, EPA has preliminarily determined that a change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties would not interfere with the Area's ability to attain or maintain the 1997 or 2008 ozone NAAQS in the Charlotte Area.

c. Noninterference Analysis for the PM NAAQS

Over the course of several years, EPA has reviewed and revised the $PM_{2.5}$ NAAQS a number of times. On July 16, 1997, EPA established an annual $PM_{2.5}$ NAAQS of 15.0 micrograms per cubic meter ($\mu g/m^3$), based on a 3-year average of annual mean $PM_{2.5}$ concentrations, and a 24-hour $PM_{2.5}$ NAAQS of 65 $\mu g/m^3$, based on a 3-year average of the 98th percentile of 24-hour concentrations. *See* 62 FR 36852 (July 18, 1997). On September 21, 2006, EPA retained the 1997 Annual $PM_{2.5}$ NAAQS of 15.0 $\mu g/m^3$ but revised the 24-hour $PM_{2.5}$

[12] The Enochville monitor shut down after the 2014 monitoring season. There was not enough data at the location to calculate a 3-year average design value for 2012-2014.

NAAQS to 35 $\mu g/m^3$, based again on a 3-year average of the 98th percentile of 24-hour concentrations. *See* 71 FR 61144 (October 17, 2006). On December 14, 2012, EPA retained the 2006 24-hour $PM_{2.5}$ NAAQS of 35 $\mu g/m^3$ but revised the annual primary $PM_{2.5}$ NAAQS to 12.0 $\mu g/m^3$, based again on a 3-year average of annual mean $PM_{2.5}$ concentrations. *See* 78 FR 3086 (January 15, 2013).

EPA promulgated designations for the 1997 Annual $PM_{2.5}$ NAAQS on January 5, 2005 (70 FR 944), and April 14, 2005 (70 FR 19844). The Charlotte Area was designated unclassifiable/attainment for the 1997 Annual $PM_{2.5}$ standards. As mentioned above, EPA revised the Annual $PM_{2.5}$ NAAQS in December 2012. EPA completed designations for the 2012 Annual $PM_{2.5}$ NAAQS for most areas on December 14, 2015, and designated counties in the Charlotte Area as unclassifiable/attainment. *See* 80 FR 2206 (January 15, 2015).

In 2013, the Charlotte Area $PM_{2.5}$ design values were 9.8 $\mu g/m^3$ for the Annual $PM_{2.5}$ NAAQS and 22 $\mu g/m^3$ for the 24-hour $PM_{2.5}$ NAAQS. North Carolina's MOVES2014 modeling predicted slight reductions of direct $PM_{2.5}$ emissions (0.23 percent reduction in 2015 and a 0.61 percent reduction in 2026) after changing the model inputs to reflect the proposed use of 9.0 psi RVP fuel in Gaston and Mecklenburg Counties. As discussed above, the MOVES 2014 modeling also predicted small increases in NOx and VOC emissions due to the proposed RVP relaxation. However, EPA believes that any resulting increase in ambient $PM_{2.5}$ concentrations resulting from these changes would not cause interference with the $PM_{2.5}$ NAAQS because the NOx and VOC mobile emission increases would be small in relation to the current total emissions and because ambient $PM_{2.5}$ concentrations in the southeastern U.S. tend to be impacted more significantly by direct $PM_{2.5}$ and SO2 emissions than by NOx and anthropogenic

VOC emissions.[13] As discussed below, the MOVES2014 model did not predict any impact on SO2 emissions due to RVP relaxation in Gaston and Mecklenburg Counties. Given the current $PM_{2.5}$ concentrations in the Charlotte Area and the results of North Carolina's emissions analysis, EPA has preliminarily determined that a change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties would not interfere with maintenance of the 1997 Annual $PM_{2.5}$ NAAQS or the 2006 24-hour $PM_{2.5}$ NAAQS in the Charlotte Area.[14]

d. Noninterference Analysis for the 2010 NO_2 NAAQS

On February 17, 2012, EPA designated all counties in North Carolina as unclassifiable/attainment for the 2010 NO_2 NAAQS. *See* 77 FR 9532. Based on the technical analysis in North Carolina's April 16, 2015, RVP-related SIP revision, the projected increase in total anthropogenic NOx emissions associated with the change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties is approximately 0.11 tpd in 2015 and 0.01 tpd in 2026. Given the current unclassifiable/attainment designation and the results of North Carolina's emissions analysis, EPA has preliminarily determined that a change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties would not interfere with maintenance of the 2010 NO_2 NAAQS in the Charlotte Area.

e. Noninterference Analysis for the CO NAAQS

[13] The main precursors for $PM_{2.5}$ are NOx, SO_2, VOC and ammonia. There have been a number of studies in the Southeast which have indicated that SO_2 is the primary driver of $PM_{2.5}$ formation in the Southeast. *See, e.g.*, Journal of Environmental Engineering- Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States (June 24, 2009), http://www.journals.elsevier.com/journal-of-environmental-management

[14] EPA has also preliminarily determined that a change to 9.0 psi RVP fuel in the Charlotte Area would not interfere with maintenance of the Annual PM_{10} NAAQS of 150 $\mu g/m^3$ given the results of North Carolina's emissions analysis and the fact that the Area is currently attaining the PM_{10} standard. Because $PM_{2.5}$ is a component of PM_{10}, this preliminary determination is further supported by the downward trend in $PM_{2.5}$ identified above.

In November 6, 1991, Mecklenburg County was classified as "not classified" for the 1971 8-hour CO NAAQS of 9 ppm. *See* 56 FR 56694. Mecklenburg County was redesignated to attainment for the 8-hour CO NAAQS on August 2, 1995. *See* 60 FR 39258. On August 31, 2011, EPA retained the 8-hour standard and 1-hour standard. *See* 76 FR 54294. Gaston and Mecklenburg Counties remain in attainment for the 1971 and 2011 1-hour and 8-hour CO NAAQS.

North Carolina's MOVES2014 modeling projected an increase in total on-road mobile source CO emissions of approximately 2.78 tpd in 2015 and 1.44 tpd in 2026 (0.71 percent and 0.60 percent of estimated total on-road mobile source emissions in those years, respectively) after changing the model inputs to reflect the proposed use of 9.0 psi RVP fuel in Gaston and Mecklenburg Counties. The 2012 and 2013 ambient monitoring data showed maximum 8-hour concentration of 1.2 ppm for the 8-hour CO. Additionally, 2012 and 2013 ambient monitoring data showed maximum 1-hour CO concentrations of 2.3 and 1.7 ppm, respectively, well below the 35 ppm 1-hour CO NAAQS. Given the current unclassifiable/attainment designation, ambient monitoring data, and the results of North Carolina's emissions analysis, EPA has preliminarily determined that a change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties would not interfere with maintenance of the 1971 1-hour and 8-hour CO NAAQS in the Charlotte Area.

f. Noninterference Analysis for the SO_2 NAAQS

On June 22, 2010, EPA revised the 1-hour SO_2 NAAQS to 75 parts per billion (ppb) which became effective on August 23, 2010. *See* 75 FR 35520. On August 5, 2013, EPA designated nonattainment only in areas with violating 2009-2011 monitoring data. EPA did not

designate any county in North Carolina for the 2010 1-hour SO_2 NAAQS as part of the initial designation. *See* 78 FR 47191. On March 2, 2015, a Consent Decree was issued by the United States District Court for the Northern District of California stipulating the time and method for designating the remaining areas in the Country.[15]

North Carolina's MOVES2014 modeling did not predict any change in SO_2 emissions due to RVP relaxation. The Charlotte Area had a design value of 10 ppb, about 13 percent of the SO_2 NAAQS. Additionally, 3 percent of total SO_2 is derived from on-road, nonroad and area sources combined and the remaining 97 percent from point sources.[16] For these reasons, EPA has preliminarily determined that a change to 9.0 psi RVP fuel for Gaston and Mecklenburg Counties would not interfere with maintenance of the 2012 SO_2 NAAQS in the Charlotte Area.

VI. Proposed Action

EPA is proposing to approve the State of North Carolina's noninterference demonstration, submitted on April 16, 2015, in support of the State's request that EPA change the Federal RVP requirements for Gaston and Mecklenburg Counties from 7.8 psi to 9.0 psi. Specifically, EPA is proposing to find that this change in the RVP requirements for Gaston and Mecklenburg Counties will not interfere with attainment or maintenance of any NAAQS or with any other applicable requirement of the CAA. North Carolina's April 16, 2015, SIP revision also updates its maintenance plan and the associated MVEBs related to the State's redesignation request for the North Carolina portion of the 2008 Charlotte 8-hour Ozone Area to reflect

[15] Copy of the Consent Decree- http://www.epa.gov/so2designations/pdfs/201503FinalCourtOrder.pdf

[16] "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 the EPA on December 18, 2009, Figure 4-2, p. 4-4).

emissions changes for the requested change to the Federal RVP requirements. EPA is proposing to approve those changes to update the maintenance plan and the MVEBs. As previously mentioned, final action on North Carolina's noninterference demonstration is contingent upon EPA approving the State's redesignation request and maintenance plan for the North Carolina portion of Charlotte 2008 8-hour Ozone Area.

EPA has preliminarily determined that North Carolina's April 16, 2015, RVP-related SIP revision is consistent with the applicable provisions of the CAA. EPA is not proposing action today to remove the Federal 7.8 psi RVP requirement for Gaston and Mecklenburg Counties. Any such proposal would occur in a separate and subsequent rulemaking.

VII. 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 proposes to approve state law as meeting Federal requirements and does not propose to 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 Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- 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, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000) nor will it 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, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Volatile organic compounds.

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

Dated: May 12, 2015.

Heather McTeer Toney

Regional Administrator,
Region 4.

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