6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R04-OAR-2015-0501; FRL-9946-14-Region 4]

Air Plan Approval and Disapproval; North Carolina: New Source Review for Fine Particulate Matter ($PM_{2.5}$)

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve, in part, and disapprove, in part, changes to the North Carolina State Implementation Plan (SIP), provided by the North Carolina Department of Environmental Quality (NC DEQ) through the Division of Air Quality, to EPA in submittals dated May 16, 2011 (two separate submittals), and September 5, 2013. These SIP submittals modify North Carolina's New Source Review (NSR) – Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) – permitting regulations and include the adoption of some federal requirements regarding implementation of the fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS) through the NSR permitting program. As a result of the proposed disapproval of a portion of the State's NSR requirements, EPA is also proposing to approve, in part, and disapprove, in part, the PSD elements of North Carolina's infrastructure SIP submittals for the 2008 lead, 2008 8-hour ozone, 2010 sulfur dioxide (SO_2), 2010 nitrogen dioxide (NO_2) and the 2012 $PM_{2.5}$ NAAQS, and to convert the Agency's previous conditional approvals of the PSD elements of North Carolina's

infrastructure SIP submittals for the 1997 Annual $PM_{2.5}$ and 2006 24-hour $PM_{2.5}$ NAAQS to partial approvals and partial disapprovals. This proposed partial disapproval, if finalized, will trigger the requirements for EPA to promulgate a Federal Implementation Plan (FIP) no later than two years from the date of the disapproval unless the State corrects the deficiencies through a SIP revision and EPA approves the SIP revision before EPA promulgates such a FIP.

DATES: 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 No EPA-R04-OAR-2015-0501 at http://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Joel Huey of 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. Huey can be reached by telephone at (404) 562-9104 or via electronic mail at huey.joel@epa.gov.

SUPPLEMENTARY INFORMATION:

I. What Are the Actions EPA Is Proposing?

EPA is proposing four actions, some with multiple parts, with regard to North Carolina's

SIP submittals updating the State's PSD and NNSR regulations found at 15A North Carolina Administrative Code (NCAC) 02D .0530 and 15A NCAC 02D .0531.[1] First, EPA is proposing to approve a May 16, 2011, SIP submittal from North Carolina (as revised and updated by the State's September 5, 2013, SIP submittal) as meeting the requirements of EPA's rule, "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$);" Final Rule, 73 FR 28321 (May 16, 2008) (hereafter referred to as the "2008 NSR $PM_{2.5}$ Implementation Rule").

Second, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP submittal with regard to changes to the State's regulation at 15A NCAC 02D .0530 because North Carolina's changes do not fully meet the requirements of EPA's rulemaking, "Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$) – Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC)," Final Rule, 75 FR 64864 (October 20, 2010) (hereafter referred to as the "2010 PSD $PM_{2.5}$ Rule").

Third, EPA is proposing to approve administrative changes to North Carolina's PSD and NNSR regulations at 15A NCAC 02D .0530 and 15A NCAC 02D .0531 provided by the State in a SIP submittal also dated May 16, 2011, including clarification of the applicability of best available control technology (BACT) and lowest achievable emission rate (LAER) for electrical generating units (EGUs) in the State, and the inclusion of an additional Federal Land Manager (FLM) notification provision.

[1] North Carolina's preconstruction permitting program for new and modified stationary sources is codified at 15A NCAC Subchapter 02D. Specifically, North Carolina's PSD preconstruction regulations are found at 15A NCAC 02D .0530 and apply to major stationary sources or modifications constructed in areas designated attainment or unclassifiable/attainment for the NAAQS, as required under part C of title I of the Clean Air Act (CAA or Act). North Carolina's NNSR regulations are found at 15A NCAC 02D .0531 and apply to the construction and modification of any major stationary source of air pollution in or impacting upon a NAAQS nonattainment area, as required by Part D of title I of the CAA.

Lastly, as a result of the proposed disapproval of a portion of the State's NSR requirements, EPA is proposing to approve, in part, and disapprove, in part, the PSD elements of the North Carolina's infrastructure SIP submittals for the 2008 lead, 2008 8-hour ozone, 2010 SO_2, 2010 NO_2 and the 2012 $PM_{2.5}$ NAAQS and to convert the Agency's previous conditional approvals of the PSD elements of the North Carolina's infrastructure SIP submittals for the 1997 Annual $PM_{2.5}$ and 2006 24-hour $PM_{2.5}$ NAAQS to partial approvals and partial disapprovals.

II. Fine Particulate Matter and the NAAQS

"Particulate matter," also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. EPA groups particle pollution into two categories:

- "Inhalable coarse particles," or PM_{10}, are particles larger than 2.5 micrometers but smaller than 10 micrometers in diameter. Inhalable coarse particles can be directly emitted from sources such as roadways and industries that create dusty emissions.
- "Fine particles," or $PM_{2.5}$, are solid or liquid particles that are 2.5 micrometers in diameter and smaller. Fine particles can be directly emitted from sources such as industrial processes, diesel and gasoline engines, and wildfires, or they can be formed in the atmosphere secondarily as a result of chemical reactions between specific pollutants

(known as $PM_{2.5}$ precursors) that are emitted primarily from mobile and stationary combustion sources.

The Clean Air Act (CAA or Act) requires EPA to set air quality standards to protect both public health and the public welfare (e.g., visibility, crops and vegetation). Particle pollution, especially fine particles, affects both. The human health effects associated with long- or short-term exposure to $PM_{2.5}$ are significant and include premature mortality, aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions and emergency room visits) and development of chronic respiratory disease. In addition, welfare effects associated with elevated $PM_{2.5}$ levels include visibility impairment as well as effects on sensitive ecosystems, materials damage and soiling and climatic and radiative processes.

On July 18, 1997, EPA revised the NAAQS for PM to add new standards for fine particles, using $PM_{2.5}$ as the indicator. *See* 62 FR 38652. Previously, EPA used PM_{10} (inhalable particles smaller than or equal to 10 micrometers in diameter) as the indicator for the PM NAAQS. EPA established health-based (primary) annual and 24-hour standards for $PM_{2.5}$, setting an annual standard at a level of 15 micrograms per cubic meter ($\mu g/m^3$) and a 24-hour standards at a level of 65 $\mu g/m^3$. *Id*. At the time EPA established the 1997 primary standards, EPA also established welfare-based (secondary) standards identical to the primary standards. *Id*. The secondary standards are designed to protect against major environmental effects of $PM_{2.5}$, such as visibility, impairment, soiling, and materials damage. *Id*. On October 17, 2006, EPA revised the primary and secondary NAAQS for $PM_{2.5}$. *See* 71 FR 61236. In that rulemaking, EPA reduced the 24-hour NAAQS for $PM_{2.5}$ to 35 $\mu g/m^3$ and retained the existing annual $PM_{2.5}$

NAAQS of 15 µg/m^3. *Id*. On December 14, 2012, the EPA Administrator signed a final rule revising the annual $PM_{2.5}$ NAAQS to 12 µg/m^3. *See* 78 FR 3086 (January 15, 2013).

Whenever a new or revised NAAQS is promulgated, section 110(a) of the CAA obligates states to submit SIP revisions that provide for the implementation, maintenance, and enforcement of the new or revised NAAQS within three years following promulgation of such NAAQS—the so-called infrastructure SIP revisions. Although states typically have met many of the basic program elements required in section 110(a)(2) through earlier SIP submittals in connection with previous PM standards, states were still required to submit SIP revisions that address section 110(a)(2) for the 1997, 2006 and 2012 $PM_{2.5}$ NAAQS.

III. What is EPA's Analysis of North Carolina's May 16, 2011, and September 5, 2013, SIP Submittals Addressing NSR Requirements?

North Carolina provided its May 16, 2011, and September 5, 2013, SIP submittals to, among other things, comply with federal permitting requirements related to implementation of the $PM_{2.5}$ NAAQS through the NSR program. The relevant federal $PM_{2.5}$ permitting requirements for SIPs, set forth in 40 CFR 51.165 and 51.166, were promulgated by EPA in the 2008 NSR $PM_{2.5}$ Implementation Rule and the 2010 PSD $PM_{2.5}$ Rule. States were required to make their SIP submittals to address the requirements of the 2008 NSR $PM_{2.5}$ Implementation Rule no later than May 16, 2011, and to make their submittals to address the requirements of the 2010 PSD $PM_{2.5}$ Rule no later than July 20, 2012.

A. North Carolina's SIP Submittal Changes Regarding the 2008 NSR $PM_{2.5}$ Implementation Rule

North Carolina submitted its SIP to comply with the requirements of the 2008 NSR $PM_{2.5}$ Implementation Rule on May 16, 2011. Subsequently, on September 5, 2013, North Carolina

submitted an update to its original submittal to correct a deficiency related to the significant emission rate for nitrogen oxides (NOx) as a precursor to $PM_{2.5}$ formation. Background on the 2008 NSR $PM_{2.5}$ Implementation Rule and EPA's analysis of North Carolina's SIP submittals to comply with that rule is provided below.

1. Background on EPA's 2008 NSR $PM_{2.5}$ Implementation Rule

On May 16, 2008, EPA finalized the 2008 NSR $PM_{2.5}$ Rule to implement the 1997 $PM_{2.5}$ NAAQS for the NSR permitting program. *See* 73 FR 28321. The 2008 NSR $PM_{2.5}$ Implementation Rule revised the federal NSR program requirements to establish the framework for implementing preconstruction permit review for the $PM_{2.5}$ NAAQS in both attainment and nonattainment areas. Among other things, the 2008 NSR $PM_{2.5}$ Rule required states to incorporate into their SIPs the following components of the NSR program for the $PM_{2.5}$ NAAQS: (1) the requirement for NSR permits to address directly emitted $PM_{2.5}$ and precursor pollutants that contribute to the secondary formation of $PM_{2.5}$; (2) significant emission rates for direct $PM_{2.5}$ and precursor pollutants that lead to the secondary formation of $PM_{2.5}$ (including SO_2, NOx, and volatile organic compounds (VOC)[2]); (3) NNSR $PM_{2.5}$ emission offsets; and (4) the requirement for applicability determinations and emission limits in PSD and NNSR permits to account for gases that condense to form particles (condensables) in $PM_{2.5}$ and PM_{10}.[3]

[2] Under the 2008 NSR $PM_{2.5}$ Rule, VOC is presumed not to be a precursor to $PM_{2.5}$ unless the state demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of VOC from sources in a specific area are a significant contributor to that area's ambient $PM_{2.5}$ concentrations.

[3] Additionally, the 2008 NSR $PM_{2.5}$ Implementation Rule authorized states to adopt provisions in their nonattainment NSR rules that allowed for "interpollutant trading" for emission offsets. Specifically, the rule authorized states to allow new major stationary sources and major modifications in $PM_{2.5}$ nonattainment areas to offset increases of direct $PM_{2.5}$ emissions or $PM_{2.5}$ precursors with reductions of either direct $PM_{2.5}$ emissions or $PM_{2.5}$ precursors in accordance with interpollutant offset ratios contained in the area's approved SIP. North Carolina elected not to include interpollutant trading ratios in its final SIP submittals and therefore will not be implementing interpollutant trading at this time.

North Carolina's May 16, 2011, SIP submittal (as revised by the State's September 5, 2013, SIP submittal) addresses the PSD and NNSR provisions established in EPA's May 16, 2008, NSR $PM_{2.5}$ Implementation Rule. Two key issues, the NSR $PM_{2.5}$ litigation and condensable particulate matter emissions, are described in greater detail below.

a. NSR $PM_{2.5}$ Litigation

On January 4, 2013, the United States Court of Appeals for the District of Columbia Circuit (hereafter referred to as the D.C. Circuit or Court) issued a judgment[4] that remanded two of EPA's rules promulgated for implementation of the 1997 $PM_{2.5}$ NAAQS, including the 2008 NSR $PM_{2.5}$ Implementation Rule. *See Natural Resources Defense Council* v. *EPA*, 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the $PM_{2.5}$ NAAQS in these rules solely pursuant to the general implementation provisions of subpart 1 of part D of title I of the CAA, rather than pursuant to the additional implementation provisions specific to particulate matter nonattainment areas in subpart 4. EPA had developed the NNSR requirements in the 2008 NSR $PM_{2.5}$ Implementation Rule pursuant to the general nonattainment requirements of subpart 1 of Part D, title I, of the CAA. Relative to subpart 1, subpart 4 of Part D, title I includes additional provisions that apply to PM_{10} nonattainment and is more specific about what states must do to bring areas into attainment. In particular, subpart 4 includes section 189(e) of the CAA, which requires the control of major stationary sources of PM_{10} precursors (and hence under the court decision, $PM_{2.5}$ precursors) "except where the Administrator determines that such sources do not contribute significantly to PM_{10} levels which exceed the standard in the area."

[4] The Natural Resources Defense Council, Sierra Club, American Lung Association, and Medical Advocates for Healthy Air challenged before the D.C. Circuit EPA's April 25, 2007, Rule entitled "Clean Air Fine Particle Implementation Rule," 72 FR 20586, which established detailed implementation regulations to assist states with the development of SIPs to demonstrate attainment for the 1997 Annual and 24-hour $PM_{2.5}$ NAAQS and the separate May 16, 2008, NSR $PM_{2.5}$ Implementation Rule (which is considered in this proposed rulemaking). This proposed rulemaking only pertains to the impacts of the Court's decision on the May 16, 2008, NSR $PM_{2.5}$ Implementation Rule.

The Court found that subpart 4 applies to $PM_{2.5}$ nonattainment and ordered EPA to repromulgate the 2008 $PM_{2.5}$ Implementation Rule pursuant to subpart 4.

The 2008 NSR $PM_{2.5}$ Implementation Rule promulgated new NSR requirements for implementation of $PM_{2.5}$ in both nonattainment areas (NNSR) and attainment/unclassifiable areas (PSD). As Subpart 4 includes requirements only pertinent to nonattainment areas, EPA does not consider the portions of the 2008 rule that address requirements for $PM_{2.5}$ attainment and unclassifiable areas to be affected by the Court's opinion.

On June 2, 2014, EPA published a final rule[5] which, in part, set a December 31, 2014, deadline for states to make any remaining required SIP submittals needed for an attainment plan or the NNSR program, pursuant to and considering the application of subpart 4. *See* 79 FR 31566. Requirements under subpart 4 for a moderate nonattainment area are generally comparable to subpart 1, including: (1) CAA section 189(a)(1)(A) (NNSR permit program); (2) section 189(a)(1)(B) (attainment demonstration or demonstration that attainment by the applicable attainment date is impracticable); (3) section 189(a)(1)(C) (reasonably available control measures and reasonably available control technology; and (4) section 189(c) (reasonable further progress and quantitative milestones). The additional requirements pursuant to subpart 4 as opposed to subpart 1 correspond to section 189(e) (precursor requirements for major stationary sources). Further additional SIP planning requirements are introduced by subpart 4 in the event that a moderate nonattainment area is reclassified to a serious nonattainment area, or in the event that the moderate nonattainment area needs additional time to attain the NAAQS. The

[5] The rule is titled "Identification of Nonattainment Classification and Deadlines for Submission of State Implementation Plan (SIP) Provisions for the 1997 Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standard (NAAQS) and 2006 $PM_{2.5}$ NAAQS," Final Rule, 79 FR 31566 (June 2, 2014). This final rule also identifies the initial classification of current 1997 and 2006 $PM_{2.5}$ nonattainment areas as moderate and the EPA guidance and relevant rulemakings that are currently available regarding implementation of subpart 4 requirements.

additional requirements under subpart 4 are not applicable for the purposes of CAA section 107(d)(3)(E) in any area that has submitted a complete redesignation request prior to the due date for those requirements; therefore, EPA is not required to consider subpart 4 requirements for moderate nonattainment areas that have submitted a redesignation request prior to December 31, 2014, or for any area that has already been redesignated to attainment. *See* 79 FR at 31570.

Two areas were initially designated nonattainment for the 1997 Annual $PM_{2.5}$ NAAQS in North Carolina: the Greensboro-Winston Salem-High Point Area (hereafter referred to as the Greensboro Area)[6] and the Hickory-Morganton-Lenoir Area (hereafter referred to as the Hickory Area).[7] On December 18, 2009 (later supplemented on December 22, 2010), NC DEQ[8]submitted redesignation requests for the Greensboro Area and the Hickory Area. These requests were granted, and the Greensboro Area and the Hickory Area were both redesignated to attainment on November 18, 2011. *See* 76 FR 71455 and 76 FR 71452, respectively. Because the counties comprising these areas have been redesignated to attainment, and no portions of North Carolina were designated nonattainment for either the 2006 $PM_{2.5}$ NAAQS or the 2012 $PM_{2.5}$ NAAQS, the State has no existing $PM_{2.5}$ nonattainment areas. Therefore, the State is not currently required to regulate $PM_{2.5}$ as part of its NNSR permitting program and, accordingly, the State did not need to submit additional SIP elements for $PM_{2.5}$ to satisfy the Subpart 4 requirements.

[6] The nonattainment area for the Greensboro Area for the 1997 $PM_{2.5}$ standard was comprised of Guilford and Davidson counties.

[7] The nonattainment area for the Hickory Area for the 1997 $PM_{2.5}$ standard was comprised of Catawba County only.

[8] Formerly the North Carolina Department of Environment and Natural Resources.

b. Condensables

In the 2008 NSR $PM_{2.5}$ Rule, EPA revised the definition of "regulated NSR pollutant" for PSD by adding paragraph 51.166(b)(49)(vi), which provided that "particulate matter (PM) emissions, $PM_{2.5}$ emissions and PM_{10} emissions" shall include gaseous emissions from a source or activity which condense to form PM at ambient temperatures and that on or after January 1, 2011, such condensable PM shall be accounted for in applicability determinations and in establishing emissions limitations for PM, $PM_{2.5}$ and PM_{10} in permits. *See* 73 FR at 28335. A similar paragraph revised the definition of "regulated NSR pollutant" in the NNSR rule but specified applicability to only "$PM_{2.5}$ emissions and PM_{10} emissions" and not to "particulate matter (PM) emissions." *See* 40 CFR 51.165(a)(1)(xxxvii)(D).

Subsequently, EPA concluded that the 2008 NSR $PM_{2.5}$ Rule's requirement that the measurement of "particulate matter emissions" (as opposed to $PM_{2.5}$ or PM_{10}) must include the condensable fraction of primary PM was an inadvertent error. On October 25, 2012, EPA corrected this inadvertent error by revising the definition of "regulated NSR pollutant" contained in the regulations for PSD at 40 CFR 51.166 and 52.21, and in EPA's Emission Offset Interpretative Ruling at 40 CFR part 51 Appendix S. *See* 77 FR 65107. In taking that action, EPA explained that requiring inclusion of condensable PM in measurements of "particulate matter emissions" would have little if any effect on preventing significant air quality deterioration or on efforts to attain the primary and secondary PM NAAQS. *See* 77 FR at 65112. Thus, as revised, the federal PSD regulations do not require the inclusion of condensable PM in measurements of "particulate matter emissions," except where either the applicable NSPS compliance test includes the condensable PM fraction or the applicable implementation plan requires the condensable PM fraction to be counted. *Id.*

North Carolina's May 16, 2011, SIP submittal (as updated by the September 5, 2013, submittal) adopts EPA's definition for "regulated NSR pollutant" requiring states to consider condensables (at 40 CFR 51.166(b)(49)(vi)). However, because the State's submittal adopts the definitions in the CFR as of May 16, 2008 (prior to EPA's correction), the State's rule requires sources to account for the condensable fraction in the measurement and regulation of "PM emissions" as well as "$PM_{2.5}$ emissions" and "PM_{10} emissions." As explained above, this difference between North Carolina's regulations and the current federal PSD regulations does not impact North Carolina's efforts to prevent significant deterioration of air quality or to attain and maintain compliance with the PM NAAQS.

2. EPA's Analysis of North Carolina's SIP Submittal Changes Regarding the 2008 NSR $PM_{2.5}$ Implementation Rule

In a May 16, 2011, SIP submittal intended to satisfy the State's obligations under the 2008 $PM_{2.5}$ Implementation Rule, North Carolina proposed to incorporate by reference (IBR) into North Carolina's SIP, with one exception, the relevant portions of the federal PSD and NNSR permitting regulations at 40 CFR 51.166 and 51.165 effective as of May 16, 2008.[9] Specifically, North Carolina's May 16, 2011, submittal incorporates by reference into North Carolina's PSD regulations at 15A NCAC 02D .0530 (state effective date January 2, 2011) and into North Carolina's NNSR regulations at 15A NCAC 02D .0531 (state effective date January 2, 2011) the following PSD and NNSR provisions promulgated in the 2008 NSR $PM_{2.5}$ Implementation Rule: (1) the requirement for PSD and NNSR permits to address directly

[9] Paragraph (w) of 15A NCAC 02D .0530 (effective date January 2, 2011) and Paragraph (o) of 15A NCAC 02D .0531 (effective date January 2, 2011) states: "The reference to the Code of Federal Regulations (CFR) in this Rule are incorporated by reference unless a specific reference states otherwise. Except for 40 CFR 81.334, the version of the CFR incorporated in this Rule is that as of May 16, 2008, and does not include any subsequent amendments or editions to the referenced material."

emitted $PM_{2.5}$ and precursor pollutants (SO_2 and NOx (as codified at 40 CFR 51.165(a)(1)(xxxvii)(C) and 51.166(b)(49)); (2) the significant emission rates for direct $PM_{2.5}$ and precursor pollutant (SO_2) (as codified at 40 CFR 51.165(a)(1)(x)(A) and 51.166(b)(23)(i)); (3) the NNSR $PM_{2.5}$ emission offsets (as codified at 51.165(9)(i)); and (4) the PSD and NNSR requirement that condensable PM, PM_{10} and $PM_{2.5}$ emissions be accounted in PSD applicability determinations and in establishing emissions limitations for permitting (as codified at 40 CFR 51.165(a)(1)(xxxvii)(D) and 51.166(b)(49)).[10]

The one exception to North Carolina's IBR of relevant requirements from the 2008 NSR $PM_{2.5}$ Implementation Rule in the State's May 16, 2011, submittal is the significant emissions rate for NOx as a precursor to the secondary formation of $PM_{2.5}$. Specifically, instead of incorporating the 40 tons per year (tpy) significant emission rate for NOx as a $PM_{2.5}$ precursor (set forth at 40 CFR 51.165(a)(1)(x)(A) and 40 CFR 51.166(b)(23)(i)), the state regulations included in North Carolina's May 16, 2011, SIP submittal set the rate at 140 tpy for both PSD and NNSR (at 15A NCAC 02D .0530(b)(4) and 15A NCAC 02D .0531(a)(3)).

As mentioned above, in the 2008 NSR $PM_{2.5}$ Rule, EPA promulgated final rules governing the implementation of NSR program for $PM_{2.5}$ including adding significant emission rates for direct $PM_{2.5}$ and their precursors of SO_2 and NOx. EPA's permitting program uses significant emission rates to determine the applicability of major NSR requirements to existing sources undergoing modifications. Specifically, EPA established the federal definition of "significant" for $PM_{2.5}$ is 40 tpy for NOx unless it is demonstrated not to be a $PM_{2.5}$ precursor as provided under the definition of "Regulated NSR Pollutant." *See* 40 CFR 51.165(a)(1)(x)(A) and 51.166(b)(23)(i). Pursuant to 40 CFR 51.166, a SIP can be more stringent than required by

[10] As discussed above, on October 25, 2012, EPA removed the requirement that condensable PM be included in measurements of "particulate matter emissions." *See* 77 FR 65107.

40 CFR 51.166 but not less stringent. Under the 2008 NSR $PM_{2.5}$ Implementation Rule, unless the state demonstrates that NOx is not a significant contributor to $PM_{2.5}$ in a specific area, the significance threshold for NOx as a $PM_{2.5}$ precursor can be no higher than 40 tpy. 40 CFR 51.166(b)(23)(i). North Carolina did not submit a demonstration that NOx is not a significant contributor to $PM_{2.5}$ formation in the State. Thus, North Carolina's adoption of a significant emission rate of 140 tpy for NOx as a precursor to $PM_{2.5}$ in its May 16, 2011, SIP submittal is inconsistent with the federal requirements.

In a subsequent SIP submittal, dated September 5, 2013, North Carolina revised the significant emission rate for NOx as a $PM_{2.5}$ precursor. Specifically, North Carolina submitted updated versions of 15A NCAC 02D .0530 (state effective date September 1, 2013) and 15A NCAC 02D .0531 (state effective date September 1, 2013) that IBR the federal rate of 40 tpy for NOx as a $PM_{2.5}$ precursor into the North Carolina. *See* 15A NCAC 02D .0530(b)(4) (PSD regulations) and 15A NCAC 02D .0531(a)(3) (NNSR regulations). Therefore, the 140 tpy significant emission rate for NOx as a $PM_{2.5}$ precursor originally proposed in North Carolina's May 16, 2008, SIP submittal has been replaced and is no longer before the Agency for review and consideration.

EPA notes that North Carolina's submittal contains provisions relevant to nonattainment NSR programs for $PM_{2.5}$ nonattainment areas. Specifically, in the definition of "regulated NSR pollutant," the submittal provides that SO_2 is a $PM_{2.5}$ precursor, NOx is presumed to be a $PM_{2.5}$ precursor, and VOCs and ammonia are presumed to not be $PM_{2.5}$ precursors. This provision is consistent with the nonattainment NSR regulations promulgated in the 2008 $PM_{2.5}$ NSR Implementation Rule. However, as mentioned above, on January 4, 2013, the D.C. Circuit, in *Natural Resources Defense Council v. EPA*, 706 F.3d at 428, issued a decision that remanded the

2008 $PM_{2.5}$ NSR Implementation Rule back to EPA. The Court held that the provisions of subpart 4 of the CAA apply in areas designated nonattainment for a $PM_{2.5}$ NAAQS. These subpart 4 requirements, as applied to $PM_{2.5}$, include section 189(e) of the CAA, which requires the control of major stationary sources of $PM_{2.5}$ and all $PM_{2.5}$ precursors, i.e., SO_2, NOx, VOC, and ammonia, in $PM_{2.5}$ nonattainment areas unless the Administrator determines that such sources of a particular precursor do not contribute significantly to levels that exceed the standard in the nonattainment area.

Although the State's submittal only requires regulation of SO_2 and NOx as $PM_{2.5}$ precursors in its NNSR permitting program, the State of North Carolina has no $PM_{2.5}$ nonattainment areas. Accordingly, EPA finds it reasonable to conclude that major sources of VOCs and ammonia currently do not contribute significantly to $PM_{2.5}$ nonattainment within the State. Thus, there is no need at this time for the State to regulate VOCs or ammonia as $PM_{2.5}$ precursors in the State's nonattainment NSR permitting program, and this issue does not prevent EPA from approving the $PM_{2.5}$ precursor provisions in North Carolina's May 16, 2011, SIP submittal (as revised by the State's September 5, 2013 submittal). Should EPA in the future designate an area in North Carolina as nonattainment for $PM_{2.5}$, the State would have the obligation to submit a SIP revision demonstrating that the nonattainment NSR program meets all applicable requirements for $PM_{2.5}$, including appropriate control of major sources of $PM_{2.5}$ precursors under 189(e). *See* CAA sections 172(c)(5) and 189(a)(1)(A), (2)(B).

EPA has preliminarily determined that North Carolina's May 16, 2011, SIP submittal, as updated by the September 5, 2013 SIP submittal, satisfies the requirements of the 2008 NSR $PM_{2.5}$ Implementation Rule. Consequently, EPA is proposing to approve North Carolina's submittal (as updated) and to incorporate 15A NCAC 02D .0530 (state effective date September

1, 2013) and 15A NCAC 02D .0531 (state effective date September 1, 2013) into North Carolina's SIP, with the exception of certain regulatory provisions identified and discussed below.

B. North Carolina's SIP Submittal Changes Regarding the 2010 PSD $PM_{2.5}$ Rule

North Carolina submitted its SIP to comply with the 2010 PSD $PM_{2.5}$ Rule on September 5, 2013. Background on the 2010 PSD $PM_{2.5}$ Rule and EPA's analysis of North Carolina's SIP submittal to comply with that rule is provided below.

1. Background on EPA's 2010 PSD $PM_{2.5}$ Rule

a. Requirements of the 2010 PSD $PM_{2.5}$ Rule for PSD SIP Programs

EPA finalized the 2010 PSD $PM_{2.5}$ Rule to provide additional regulatory requirements under the PSD SIP program regarding the implementation of the $PM_{2.5}$ NAAQS. *See* 75 FR at 64864. The 2010 PSD $PM_{2.5}$ Rule required states to submit SIP revisions to EPA by July 20, 2012, adopting provisions equivalent to or at least as stringent as the PSD increments and associated implementing regulations. Specifically, the 2010 PSD $PM_{2.5}$ Rule requires states to adopt and submit for EPA approval into their SIP the numerical $PM_{2.5}$ increments promulgated pursuant to section 166(a) of the CAA to prevent significant deterioration of air quality in areas meeting the NAAQS. States are also required to adopt and submit for EPA approval revisions to the definitions for "major source baseline date," "minor source baseline date," and "baseline area" as part of the implementing regulations for the $PM_{2.5}$ increment.[11]

[11] The 2010 PSD $PM_{2.5}$ Rule also gave states discretion to adopt $PM_{2.5}$ SILs and a SMC. *See* 75 FR at 64900. On January 22, 2013, the D.C. Circuit vacated and remanded to EPA the portions of 50 CFR 51.166 and 52.21 addressing the $PM_{2.5}$ SILs and also vacated the parts of the rule that established the $PM_{2.5}$ SMC. North Carolina's September 5, 2013, submittal does not include SILs or SMC so these regulatory provisions are not relevant to today's proposed action.

b. Requirement for $PM_{2.5}$ Increments

As established in part C of title I of the CAA, EPA's PSD program protects public health from adverse effects of air pollution by ensuring that construction of new major sources or modifications in attainment or unclassifiable areas does not lead to significant deterioration of air quality while simultaneously ensuring that economic growth will occur in a manner consistent with preservation of clean air resources. Under section 165(a)(3) of the CAA, a PSD permit applicant must demonstrate that emissions from the proposed construction and operation of a facility "will not cause, or contribute to, air pollution in excess of any maximum allowable increase or allowable concentration for any pollutant." In other words, when a source applies for a permit to emit a regulated pollutant in an area that is designated as attainment or unclassifiable for a NAAQS, the state and EPA must determine if emissions of the regulated pollutant from the source will cause significant deterioration in air quality. Significant deterioration occurs when the amount of the new pollution exceeds the applicable PSD increment, which is the "maximum allowable increase" of an air pollutant allowed to occur above the applicable baseline concentration[12] for that pollutant. Therefore, an increment is the mechanism used to estimate "significant deterioration" of air quality for a pollutant in an area.

For purposes of calculating increment consumption, a baseline area for a particular pollutant includes the attainment or unclassifiable area in which the source is located, as well as any other attainment or unclassifiable area in which the source's emissions of that pollutant are projected (by air quality modeling) to result in a significant ambient pollutant increase. *See* 40 CFR 51.166(b)(14)(ii). Once the baseline area is established, subsequent PSD sources locating

[12] Section 169(4) of the CAA provides that the baseline concentration of a pollutant for a particular baseline area is generally the air quality at the time of the first application for a PSD permit in the area.

in that area need to consider that a portion of the available increment may have already been consumed by previous emissions increases.

In general, the submittal date of the first complete PSD permit application in a particular area is the operative "baseline date" after which new sources must evaluate increment consumption.[13] On or before the date of the first complete PSD application, emissions generally are considered to be part of the baseline concentration from which increment consumption is calculated, except for certain changes in emissions from major stationary sources. Emissions increases that occur after the baseline date will be counted toward the amount of increment consumed. Similarly, emissions decreases after the applicable baseline date restore or expand the amount of increment that is available.

In practice, three dates related to the PSD baseline concept are important in understanding how to calculate the amount of increment consumed— (1) trigger date; (2) major source baseline date; and (3) minor source baseline date. The first relevant date is the trigger date. The trigger date, as the name implies, is a fixed date that triggers the overall increment consumption process nationwide. *See* 40 CFR 51.166(b)(14)(ii). The two remaining dates—"major source baseline date" and "minor source baseline date"—are necessary to properly account for the emissions that are to be counted toward the amount of increment consumed following the national trigger date, in accordance with the statutory definition of "baseline concentration" in section 169(4) of the Act. The "major source baseline date," which precedes the trigger date, is the date after which actual changes in emissions associated with construction

[13] Baseline dates are pollutant-specific. That is, a complete PSD application establishes the baseline date only for those regulated NSR pollutants that are projected to be emitted in significant amounts (as defined in the regulations) by the applicant's new source or modification. Thus, an area may have different baseline dates for different pollutants.

at any major stationary source affect the PSD increment. Such changes in emissions are not included in the baseline concentration, even if the changes in emissions occur before the minor source baseline date. In accordance with the statutory definition of "baseline concentration" at section 169(4), the PSD regulations define a fixed date to represent the major source baseline date for each pollutant for which an increment exists. The "minor source baseline date" is the earliest date after the trigger date on which a source or modification submits the first complete application for a PSD permit in a particular area. This is the date on which the baseline concentration is generally established. After the minor source baseline date, any change in actual emissions (from both major and minor sources) affects the PSD increment for that area.

Once the minor source baseline date is established, the new emissions increase from the major source submitting the first PSD application consumes a portion of the increment in that area, as do any subsequent actual emissions increases that occur from any new or existing source in the area. When the maximum pollutant concentration increase defined by the increment has been reached, additional PSD permits cannot be issued until sufficient amounts of the increment are "freed up" via emissions reductions that may occur voluntarily (*e.g.*, via source shutdowns) or by mandatory control requirements imposed by the reviewing authority. Moreover, the air quality in a region cannot deteriorate to a level in excess of the applicable NAAQS, even if all the increment in the area has not been consumed. Therefore, new or modified sources located in areas where the air pollutant concentrations are near the level allowed by the NAAQS may not have full use of the amount of pollutant concentration increase allowed by the increment.

In the 2010 PSD $PM_{2.5}$ Rule, pursuant to the authority under section 166(a) of the CAA, EPA promulgated numerical increments for $PM_{2.5}$ as a new pollutant[14] for which NAAQS were established after August 7, 1977,[15] and derived 24-hour and annual $PM_{2.5}$ increments for the three area classifications (Class I, II and III). *See* 75 FR at 64869 and the ambient air increment table at 40 CFR 51.166(c)(1). EPA also established the $PM_{2.5}$ "trigger date" as October 20, 2011 (40 CFR 51.166(b)(14)(ii)(c)), and the $PM_{2.5}$ "major source baseline date" as October 20, 2010 (40 CFR 51.166(b)(14)(i). *See* 75 FR at 64903. Finally, EPA amended the term "baseline area" at 40 CFR 51.166(b)(15)(i) to include a level of significance of 0.3 $\mu g/m^3$, annual average, for establishing a new baseline area for purposes of $PM_{2.5}$ increments. *Id.*

2. EPA's Analysis of North Carolina's SIP Submittal Changes Regarding the 2010 PSD $PM_{2.5}$ Rule

North Carolina's September 5, 2013, SIP submittal adopts into the State's PSD permitting program at 15A NCAC 02D .0530 changes purporting to meet the requirements for $PM_{2.5}$ increments in EPA's 2010 PSD $PM_{2.5}$ Rule. However, while North Carolina's revised PSD regulations incorporate the numerical $PM_{2.5}$ increments at paragraphs (q) and (v) of 15A NCAC 02D .0530, the regulations do not include other key regulatory provisions needed to implement the $PM_{2.5}$ increments in accordance with federal requirements. Specifically, North Carolina's changes to 15A NCAC 02D .0530 fail to incorporate the following federal requirements pertaining to implementation of $PM_{2.5}$ increments: (1) the definition of "[m]ajor source baseline date" for $PM_{2.5}$ codified at 40 CFR 51.166(b)(14)(i)(c) (defined as October 20, 2010); (2) the

[14] EPA generally characterized the $PM_{2.5}$ NAAQS as a NAAQS for a new indicator of PM. EPA did not replace the PM_{10} NAAQS with the NAAQS for $PM_{2.5}$ when the $PM_{2.5}$ NAAQS were promulgated in 1997. EPA rather retained the Annual and 24-hour NAAQS for PM_{10} (retaining PM_{10} as an indicator of coarse particulate matter) and treated $PM_{2.5}$ as a new pollutant for purposes of developing increments. *See* 75 FR at 64864.

[15] EPA interprets section 166(a) to authorize EPA to promulgate pollutant-specific PSD regulations meeting the requirements of section 166(c) and 166(d) for any pollutant for which EPA promulgates a NAAQS after 1977.

definition of "[m]inor source baseline date" for $PM_{2.5}$ codified at 40 CFR 51.166(b)(14)(ii)(c) (which establishes the $PM_{2.5}$ trigger date as October 20, 2011); and (3) the definition of "[b]aseline area" codified at 40 CFR 51.166(b)(15)(i).[16]

Without the federally required definitions of "major source baseline date," "minor source baseline date," and "baseline area" set forth in the 2010 PSD $PM_{2.5}$ Rule, North Carolina's PSD regulations do not require PSD sources to conduct the appropriate analyses demonstrating that emissions from proposed construction of major sources or modifications will not cause or contribute to air pollution beyond the $PM_{2.5}$ increment. While a State has the option of demonstrating that it has alternative measures in its plan other than the $PM_{2.5}$ increment requirements that satisfy the prevention of significant deterioration requirements under sections 166(c) and 166(d) of the CAA (*see* 40 CFR 51.166(c)(2)), North Carolina did not offer any such demonstration in connection with its September 5, 2013, SIP submittal. Therefore, EPA proposes to disapprove the portion of North Carolina's September 5, 2013, SIP submittal pertaining to adoption and implementation of the $PM_{2.5}$ PSD increments on the basis that, taken as a whole, they are insufficient to satisfy the federal $PM_{2.5}$ PSD increment requirements set forth in the 2010 PSD $PM_{2.5}$ Rule. Specifically, EPA proposes to disapprove the changes to 15A

[16] North Carolina's draft revisions to 15A NCAC 02D .0530 would have used incorporation by reference (IBR) to adopt the federal regulations in the CFR as of October 20, 2010. In the final regulations, however, North Carolina chose to retain the former IBR date of May 16, 2008. North Carolina also chose in the final regulations to incorporate the numerical $PM_{2.5}$ increments directly into the text of 15A NCAC 02D .0530 rather than to incorporate the increments by reference. However, North Carolina's decision to IBR the provisions in the 2008 CFR rather than the provisions in the 2010 CFR meant that North Carolina did not adopt into its regulations the definitions of "major source baseline," "minor source baseline," and "baseline area" that EPA promulgated in the 2010 PSD $PM_{2.5}$ rule. Rather, North Carolina adopted the definition of these terms as they appeared in the version of the CFR in effect as of May 16, 2008. Thus, the definition of "major source baseline date" incorporated into 15A NCAC 02D .0530 does not include the federally required $PM_{2.5}$ major source baseline date of October 20, 2010, but instead states: "In the case of particulate matter and sulfur dioxide, January 6, 1975." Likewise, the definition of "minor source baseline date" incorporated into 15A NCAC 02D .0530 does not include the federally required $PM_{2.5}$ trigger date of October 20, 2011, but instead states: "In the case of particulate matter and sulfur dioxide, August 7, 1977." It is EPA's understanding that North Carolina interprets the term "particulate matter" in these definitions to encompass $PM_{2.5}$.

NCAC 02D .0530, paragraphs (e), (q), and (v) that pertain to the $PM_{2.5}$ increments.[17] EPA notes that while the numerical $PM_{2.5}$ increments at paragraphs (q) and (v) correctly reflect the numerical $PM_{2.5}$ increments required by EPA's 2010 PSD $PM_{2.5}$ Rule, EPA proposes to disapprove these provisions because North Carolina cannot properly apply the $PM_{2.5}$ increments without adopting the associated definitions of "major source baseline date," "minor source baseline date," and "baseline area."

C. North Carolina's Miscellaneous SIP Submittal Changes Regarding the NSR Program

In addition to providing SIP submittals to comply with the 2008 NSR $PM_{2.5}$ Implementation Rule and 2010 PSD $PM_{2.5}$ Rule, North Carolina provided administrative changes in the second of two May 16, 2011, SIP submittals (henceforth, the second May 16, 2011, SIP submittal) and in the September 5, 2013, SIP submittal, for the State's NSR regulations at 15A NCAC 02D .0530 (PSD) and 15A NCAC 02D .0531 (NNSR). First, North Carolina's second May 16, 2011, SIP submittal makes changes to clarify that BACT for PSD and LAER for NSR applies to all new natural gas-fired EGUs for which cost recovery is sought under the State's Clean Smokestacks Act (CSA). North Carolina's intended purpose for the rule clarification is to ensure that new-natural gas-fired EGUs that claim cost recovery pursuant to the CSA will not utilize the emission reductions to avoid BACT or LAER under the PSD or NNSR programs, respectively. EPA is proposing to approve this change to North Carolina's SIP for both rules 15A NCAC 02D .0530 and 15A NCAC 02D .0531.

[17] Paragraph (v) establishes the numerical $PM_{2.5}$ increments. Paragraph (q) addresses the Class I $PM_{2.5}$ variances. Paragraph (e) incorporates paragraph (v) by reference. EPA is proposing to disapprove 15A NCAC 02D .0530, paragraphs (e), (q), and (v) in part, rather than in their entirety, because the paragraphs also include previously approved PM_{10} increment requirements. Specifically, in addition to making the $PM_{2.5}$-related changes to these paragraphs, North Carolina also revised 15A NCAC 02D .0530, paragraphs (e), (q), and (v), to directly incorporate the PM_{10} increments. Previously, North Carolina had incorporated the PM_{10} increments into 15A NCAC 02D .0530 by reference to the CFR. EPA is proposing to approve the PM_{10}-related changes to paragraphs (e), (q), and (v).

Second, North Carolina's second May 16, 2011, SIP submittal revises 15A NCAC 02D .0531(c) by removing out-of-date, pollutant-specific nonattainment area references (for ozone and carbon monoxide) in the State,[18] and instead proposes to rely on the geographical nonattainment descriptions codified at 40 CFR 81.334 to promptly and accurately identify which areas in the State (for all NAAQS) are designated nonattainment, and thus are subject to NNSR permitting regulations. This change establishes these requirements for all future designated nonattainment areas. By relying on the automatic updates from changes to 40 CFR 81.334, this change would prevent any regulatory confusion and potential SIP gaps for identifying current nonattainment in the State subject to NNSR. EPA is proposing to approve this change as it is consistent with the CAA and EPA's requirements for NNSR.

Third, North Carolina's second May 16, 2011, SIP submittal requests removal of language at 15A NCAC 02D .0531(n), which references text being deleted from 15A NCAC 02D .0531(c), as discussed above, and provides that certain permitting requirements for new major stationary sources or modifications of VOC and NOx emissions do not apply to sources that can demonstrate through urban airshed modeling that they would not contribute to a violation of the ozone NAAQS. The applicable time period for this provision is between the notification in the *North Carolina Register* of an ozone NAAQS violation in certain area(s) of the State and the designation of such area(s) as nonattainment in 40 CFR 81.334. However, because 15A NCAC 02D .0531(c) is being revised to rely solely on the nonattainment area designations codified at 40 CFR 81.334 and not on the State's notification of ozone NAAQS violations, the language at 15A NCAC 02D .0531(n) will be obsolete. EPA is proposing to approve this change.

[18] Currently, there are no nonattainment areas in the State, and thus the list of nonattainment areas approved in the current SIP is out of date.

Fourth, North Carolina's second May 16, 2011, SIP submittal revises language at 15A NCAC 02D .0530(t) and 15A NCAC 02D .0531(m) regarding notification and administrative requirements related to visibility impacts to Class I Areas from proposed new modified sources. Specifically, North Carolina's revised regulations generally require that the state must notify the Federal Land Managers (FLM) no later than 60 days after receipt of a permit application submitted pursuant to 15A NCAC 02D .0530 (PSD) or 15A NCAC 02D .0531 (NNSR). This 60-day notice requirement is in addition to the pre-existing requirement in North Carolina's SIP-approved PSD and NNSR regulations that the state notify the FLM of any proposed new source or modification that may affect visibility in a Class I area and provide the FLM with "a copy of all information relevant to the permit application including an analysis provided by the source of the potential impact of the proposed source on visibility." *See* 15A NCAC 02D .0530(t)(2) (PSD); 15A NCAC 02D .0531(m)(3) (NNSR).

North Carolina's FLM notification provisions regarding proposed sources and modifications that may affect visibility in a Federal Class I area reflect federal regulatory requirements at 40 CFR 51.307(a)(1) governing visibility protection in state NSR programs.[19] EPA notes that the proposed changes to North Carolina's FLM notification provisions are consistent with a letter EPA sent to North Carolina officials on April 16, 2013, which is included in the docket for this proposed rulemaking. In that letter, EPA generally concurred (with some exceptions) with North Carolina's expressed understanding of EPA's interpretation of the federal requirements governing the evaluation of the visibility impacts of new and modified sources on Class I areas under the PSD permitting program. Specifically, EPA affirmed that the process for

[19] FLM notification is needed to enable the FLMs to fulfill their obligation under 50 CFR 51.166(p)(2) "to protect the air quality related values (including visibility) of [Class I lands] and to consider, in consultation with the Administrator, whether a proposed source or modification would have an adverse impact on such values."

determining whether a proposed new source or modification will cause an "adverse impact on visibility" in a Class I area is a two-step process. The first step requires an assessment of visibility impairment based on how visibility would change from what would have existed in the absence of any human-caused pollution. This analysis must be provided to the appropriate FLM(s) regardless of whether the Class I increment is exceeded. The second step in the analysis, the determination of whether the source will have an adverse impact on visibility, requires a more holistic evaluation of the various factors affecting visibility, potentially including current visibility conditions and whether the State is on track toward improving visibility. EPA concluded that because North Carolina's SIP-approved regulations at 15A NCAC 02D .0530(b) incorporate by reference the key federal regulatory provisions,[20] North Carolina's FLM notification provisions are consistent with federal visibility requirements. North Carolina's proposed SIP revision would incorporate an additional FLM notification mechanism into North Carolina's NSR procedures (generally requiring FLM notification of any PSD or NNSR permit application regardless of whether the proposed source or modification may affect visibility in a Class I area) and therefore does not conflict with the federal FLM notification requirements described above.[21] Accordingly, EPA is proposing to approve the changes to 15A NCAC 02D .0530(t) and 15A NCAC 02D .0531(m) provided in North Carolina's second May 16, 2011, SIP submittal.

Lastly, North Carolina's September 5, 2013, SIP submittal includes several

[20] When approving these provisions into North Carolina's SIP, EPA specifically noted that North Carolina's SIP incorporates the federal definitions of "adverse impact on visibility" and "visibility impairment." 51 FR 2695 (January 21, 1986). North Carolina's NNSR regulations also incorporate by reference the federal regulatory definitions pertaining to visibility impact assessment. *See* 15A NCAC 02D .0531(a).

[21] Under previously approved North Carolina SIP provisions, North Carolina must notify the FLMs of any proposed new source or modification that may affect visibility in a Class I area and provide the FLMs with an analysis of the potential visibility impact. General FLM notification of all permit applications pursuant to the SIP revision proposed for approval in today's notice would not replace North Carolina's more specific, existing SIP obligations regarding FLM notification of proposed new or modified sources that may affect visibility in a Class I area.

administrative and typographical changes for the State's NSR regulations at 15A NCAC 02D .0530 (PSD) and 15A NCAC 02D .0531 (NNSR). EPA is proposing to approve these changes to the extent that they do not relate to 2010 PSD $PM_{2.5}$ Rule.[22] Specifically, EPA is proposing to approve all of the changes to 15A NCAC 02D .0531 (NNSR) and all of the changes to 15A NCAC 02D .0530 (PSD) except the portions of paragraphs 15A NCAC 02D .0530(e), (q), and (v) that pertain to $PM_{2.5}$ increments. As explained above, EPA is proposing to disapprove the portions of paragraphs 15A NCAC 02D .0530(e), (q), and (v) that pertain to $PM_{2.5}$ increments because they are not associated with the correct major source baseline date.

In sum, EPA is proposing to approve into the SIP the versions of 15A NCAC 02D .0530 (PSD) and 15A NCAC 02D .0531 (NNSR) that became effective in the state on September 1, 2013, except the portions of paragraphs 15A NCAC 02D .0530(e), (q), and (v) that pertain to $PM_{2.5}$ increments. EPA is proposing to disapprove North Carolina's September 5, 2013, submittal with respect to the $PM_{2.5}$-increment-related portions of paragraphs 15A NCAC 02D .0530(e), (q), and (v).

IV. What is EPA's Analysis of the PSD Elements for North Carolina's Infrastructure SIP Submittals?

As mentioned above, as a result of this proposed rule to partially disapprove the PSD increment portion of North Carolina's September 5, 2013, SIP submittal, EPA is proposing to partially approve and partially disapprove the PSD elements of the North Carolina's infrastructure SIP submittals for the 2008 lead NAAQS (received on July 20, 2012); the 2008 8-

[22] For example, aside from the $PM_{2.5}$-related changes, North Carolina also revised 15A NCAC 02D .0530, paragraphs (e), (q), and (v), to directly incorporate the PM_{10} increments. Previously, North Carolina had incorporated the PM_{10} increments into 15A NCAC 02D .0530 by reference to the CFR. North Carolina's decision to instead incorporate the PM_{10} increments directly into state regulations does not change the PM_{10} increment requirements under North Carolina's PSD program and does not impact EPA's prior determination that North Carolina's SIP appropriately incorporates the federal PM_{10} increments. Therefore, EPA proposes to approve North Carolina's proposed PM_{10}-related changes to paragraphs (e), (q), and (v) of 15A NCAC 02D .0530.

hour ozone NAAQS (received on November 2, 2012); the 2010 SO_2 NAAQS (received March 18, 2014); the 2010 NO_2 NAAQS (received on August 23, 2013); and the 2012 $PM_{2.5}$ NAAQS (received on December 4, 2015). Further, EPA is proposing to convert the conditional approval of the PSD elements for North Carolina's 1997 $PM_{2.5}$ infrastructure submittal (dated April 1, 2008), and North Carolina's 2006 $PM_{2.5}$ infrastructure submittal (dated September 21, 2009) to partial approvals and partial disapprovals. The background for infrastructure submittal requirements related to PSD is provided below, followed by a summary of EPA's analysis of the PSD elements for North Carolina's 1997 $PM_{2.5}$, 2006 $PM_{2.5}$, 2008 lead, 2008 8-hour ozone, 2010 NO_2, 2010 SO_2 and 2012 $PM_{2.5}$ NAAQS infrastructure SIP submittals. In a technical support document for this proposed rulemaking, EPA provides more information on infrastructure requirements and how EPA reviews state submittals related to these requirements.

By statute, SIPs meeting the requirements of sections 110(a)(1) and (2) of the CAA are to be submitted by states within three years after promulgation of a new or revised NAAQS to provide for the implementation, maintenance, and enforcement of the new or revised NAAQS. EPA has historically referred to these SIP submittals made for the purpose of satisfying the requirements of sections 110(a)(1) and 110(a)(2) as "infrastructure SIP" submittals. Sections 110(a)(1) and (2) require states to address basic SIP elements such as for monitoring, basic program requirements, and legal authority that are designed to assure attainment and maintenance of the newly established or revised NAAQS. More specifically, section 110(a)(1) provides the procedural and timing requirements for infrastructure SIPs. Section 110(a)(2) lists specific elements that states must meet for the infrastructure SIP requirements related to a newly established or revised NAAQS. The contents of an infrastructure SIP submittal may vary depending upon the data and analytical tools available to the state, as well as the provisions

already contained in the state's implementation plan at the time in which the state develops and submits the submittal for a new or revised NAAQS.

A. PSD Elements for Infrastructure Submittals for the 2008 Lead, 2008 8-Hour Ozone, 2010 NO_2, 2010 SO_2 and 2012 $PM_{2.5}$ NAAQS

The PSD elements for infrastructure requirements are contained in section 110(a)(2)(C), 110(a)(2)(D)(i)(II) (also known as prong 3), and 110(a)(2)(J). For the remainder of this proposed rulemaking, EPA's intent in referring to "PSD elements" is to address the PSD requirements in sections 110(a)(2)(C), 110(a)(2)(D)(i)(II) (also known as prong 3), and 110(a)(2)(J). More detail regarding the aforementioned 110(a)(2) requirements related to PSD is provided below.

Section 110(a)(2)(C) has three components that must be addressed in infrastructure SIP submittals: Enforcement, state-wide regulation of new and modified minor sources and minor modifications of major sources; and PSD permitting of new major sources and major modifications in areas designated attainment or unclassifiable as required by CAA title I part C (i.e., the major source PSD program). With regard to section 110(a)(2)(C), this proposed action only addresses North Carolina's infrastructure SIP submittals with respect to the major source PSD program.

Section 110(a)(2)(D)(i) has two components; 110(a)(2)(D)(i)(I) and 110(a)(2)(D)(i)(II). Each of these components has two subparts resulting in four distinct components, commonly referred to as "prongs," that must be addressed in infrastructure SIP submittals. The first two prongs, which are codified in section 110(a)(2)(D)(i)(I), are provisions that prohibit any source or other type of emissions activity in one state from contributing significantly to nonattainment of the NAAQS in another state ("prong 1"), and interfering with maintenance of the NAAQS in another state ("prong 2"). The third and fourth prongs, which are codified in section

110(a)(2)(D)(i)(II), are provisions that prohibit emissions activity in one state from interfering with measures required to prevent significant deterioration of air quality in another state ("prong 3"), or to protect visibility in another state ("prong 4"). With regard to section 110(a)(2)(D)(i), this proposed action only addresses North Carolina's infrastructure SIP submittals for prong 3.

Section 110(a)(2)(J) has four components that must be addressed in infrastructure SIP submittals: (1) consultation with government officials, (2) public notification, (3) PSD, and (4) visibility protection. With regard to section 110(a)(2)(J), today's proposed action only addresses North Carolina's infrastructure SIP submittals for PSD.

Regarding the PSD elements of sections 110(a)(2)(C) and (J), EPA interprets the CAA to require each state to make, for each new or revised NAAQS, an infrastructure SIP submittal that demonstrates that the state has a complete PSD permitting program meeting the current requirements for all regulated NSR pollutants. The requirements of the PSD element of section 110(a)(2)(D)(i)(II) (also known as prong 3) may also be satisfied by demonstrating that the air agency has a complete PSD permitting program correctly addressing all regulated NSR pollutants.

As described in EPA's September 13, 2013, guidance,[23] an infrastructure SIP submittal should demonstrate that one or more air agencies has the authority to implement a comprehensive PSD permit program under CAA title I part C, for all PSD-subject sources located in areas that are designated attainment or unclassifiable for one or more NAAQS. EPA interprets the PSD elements to require that a state's infrastructure SIP submission for a particular NAAQS demonstrate that the state has a complete PSD permitting program in place covering the

[23] EPA's September 13, 2013, guidance, titled "Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)," provides advice on the development of infrastructure SIPs for the 2008 ozone NAAQS, the 2010 nitrogen dioxide NAAQS, the 2010 sulfur dioxide NAAQS, and the 2012 $PM_{2.5}$ NAAQS, as well as infrastructure SIPs for new or revised NAAQS promulgated in the future.

structural PSD requirements for all regulated NSR pollutants. A state's PSD permitting program is complete for the PSD elements if EPA has already approved or is simultaneously approving the state's SIP with respect to all structural PSD requirements that are due under the EPA regulations or the CAA on or before the date of the EPA's proposed action on the infrastructure SIP submission. EPA is proposing to partially approve the PSD elements of North Carolina's infrastructure SIP submittals for the 2008 lead, 2008 8-hour ozone, 2010 NO_2, 2010 SO_2, and 2012 $PM_{2.5}$ NAAQS and to disapprove these submittals with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule.

1. 2008 Lead NAAQS

On October 15, 2008, EPA revised the primary and secondary NAAQS for lead to 0.15 $\mu g/m^3$. 73 FR 66964 (November 12, 2008). States were required to submit infrastructure SIP submittals for the 2008 8-hour lead NAAQS to EPA no later than October 15, 2011. For the 2008 lead NAAQS, this proposed action only addresses the PSD elements of North Carolina's infrastructure SIP submittals received on July 20, 2012. As explained above, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP revision related to the $PM_{2.5}$ increment requirements. Consequently, North Carolina's SIP does not contain a fully approvable PSD program covering the structural PSD requirements for all NAAQS. EPA is thus proposing to approve in part the PSD elements for North Carolina's July 20, 2012, infrastructure submittal for the 2008 lead NAAQS, and disapprove this submittal with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule. EPA took action on other portions of North Carolina's July 20, 2012, SIP submittal in separate rulemakings. *See* 80 FR 12343 (March 9, 2015); 80 FR 67645 (November 3, 2015).

2. 2008 8-hour Ozone NAAQS

On March 12, 2008, EPA revised the 8-hour ozone NAAQS to 0.075 parts per million. 73 FR 16436 (March 27, 2008). States were required to submit infrastructure SIP submittals for the 2008 8-hour ozone NAAQS to EPA no later than March 12, 2011. For the 2008 8-hour ozone NAAQS, this proposed action only addresses the PSD elements of North Carolina's infrastructure SIP submittal received on November 2, 2012. As explained above, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP revision related to the $PM_{2.5}$ increment requirements. Consequently, North Carolina's SIP does not contain a fully approvable PSD program covering the structural PSD requirements for all NAAQS. EPA is thus proposing to approve in part the PSD elements for North Carolina's November 2, 2012, infrastructure submittal for the 2008 8-hour ozone NAAQS, and disapprove this submittal with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule. EPA took action on portions of North Carolina's November 2, 2012, SIP submittal in separate rulemakings. *See* 80 FR 67645 (November 3, 2015); 80 FR 68453 (November 5, 2015).

3. 2010 NO_2 NAAQS

On January 22, 2010, EPA established a new 1-hour primary NAAQS for NO_2 at a level of 100 parts per billion (ppb), based on a 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations. *See* 75 FR 6474 (February 9, 2010). States were required to submit infrastructure SIP submittals for the 2010 1-hour NO_2 NAAQS to EPA no later than January 22, 2013. For the 2010 1-hour NO_2 NAAQS, this proposed action only addresses the PSD elements of North Carolina's infrastructure SIP submittal received on August 23, 2013. As explained above, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP revision related to the $PM_{2.5}$ increment requirements. Consequently, North Carolina's SIP does not contain a fully approvable PSD program covering the structural

PSD requirements for all NAAQS. EPA is thus proposing to approve in part the PSD elements for North Carolina's August 23, 2013, infrastructure submittal for the 2010 1-hour NO_2 NAAQS, and disapprove this submittal with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule. EPA will take action on the remainder of North Carolina's August 23, 2013 SIP submittal through a separate rulemaking.

4. 2010 SO_2 NAAQS

On June 2, 2010, EPA revised the primary SO_2 NAAQS to an hourly standard of 75 ppb based on a 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. *See* 75 FR 35520 (June 22, 2010). States were required to submit infrastructure SIP submittals for the 2010 1-hour SO_2 NAAQS to EPA no later than June 2, 2013. For the 2010 1-hour SO_2 NAAQS, this proposed action only addresses the PSD elements of North Carolina's infrastructure SIP submittal received on March 18, 2014. As explained above, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP revision related to the $PM_{2.5}$ increment requirements. Consequently, North Carolina's SIP does not contain a fully approvable PSD program covering the structural PSD requirements for all NAAQS. EPA is thus proposing to approve in part the PSD elements for North Carolina's March 18, 2014, infrastructure submittal for the 2010 1-hour SO_2 NAAQS, and disapprove this submittal with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule. EPA will take action on the remainder of North Carolina's March 18, 2014, SIP submittal through a separate rulemaking.

5. 2012 $PM_{2.5}$ NAAQS

On December 14, 2012, EPA revised the primary annual $PM_{2.5}$ NAAQS to 12 $\mu g/m^3$. *See* 78 FR 3086 (January 15, 2013). An area will meet the standard if the three-year average of its annual average $PM_{2.5}$ concentration (at each monitoring site in the area) is less than or equal to

12.0 μg/m^3. States were required to submit infrastructure SIP submittals for the 2012 $PM_{2.5}$ NAAQS to EPA no later than December 14, 2015. For the 2012 $PM_{2.5}$ NAAQS, this proposed action only addresses the PSD elements of North Carolina's infrastructure SIP submittal received on December 4, 2015. As explained above, EPA is proposing to disapprove North Carolina's September 5, 2013, SIP revision related to the $PM_{2.5}$ increment requirements. Consequently, North Carolina's SIP does not contain a fully approvable PSD program covering the structural PSD requirements for all NAAQS. EPA is thus proposing to approve in part the PSD elements for North Carolina's December 4, 2015, infrastructure submittal for the 2012 $PM_{2.5}$ NAAQS, and disapprove this submittal with respect to the $PM_{2.5}$ increment requirements of 2010 PSD $PM_{2.5}$ Rule. EPA will take action on the remainder of North Carolina's December 4, 2015, SIP submittal through a separate rulemaking.

B. PSD Elements for Infrastructure Submittals for the 1997 and 2006 $PM_{2.5}$ NAAQS

On October 16, 2012, and March 26, 2013, EPA conditionally approved the PSD elements of section 110(a)(2)(C) and (J) of North Carolina's SIP submittals for the 1997 $PM_{2.5}$ and 2006 $PM_{2.5}$ NAAQS, dated April 1, 2008, and September 21, 2009, respectively. *See* 77 FR 63234 and 78 FR 18241. On April 1, 2008, and September 21, 2009, North Carolina submitted infrastructure SIP submittals for the 1997 $PM_{2.5}$ and 2006 $PM_{2.5}$ NAAQS, respectively. The conditional approvals were granted on the condition that North Carolina would submit complete SIP revisions to address deficiencies in relation to the State's NSR regulations within one year of publication of the final conditional approvals.[24]

EPA noted in the October 16, 2012, final rulemaking that "[i]f North Carolina fails to

[24] In North Carolina's July 10, 2012, request for conditional approval of the State's infrastructure submittal for the 2006 $PM_{2.5}$ NAAQS, the State committed to revising its rules to reflect the 40 tons per year significance level for NOx as a $PM_{2.5}$ precursor and to adopt the 2006 $PM_{2.5}$ PSD increments.

submit these revisions by October 16, 2013, this conditional approval will automatically become a disapproval on that date and EPA will issue a finding of disapproval. EPA is not required to propose the finding of disapproval. If the conditional approval is converted to a disapproval, the final disapproval triggers the Federal Implementation Plan requirement under section 110(c). However, if the State meets its commitment within the applicable timeframe, the conditionally approved submittal will remain a part of the SIP until EPA takes final action approving or disapproving the new submittal. If EPA disapproves the new submittal, the conditionally approved submittal will also be disapproved at that time." EPA reiterated this condition in the March 26, 2013, final rulemaking.

North Carolina provided its submittal purporting to correct the deficiencies with the State's NSR program on September 5, 2013. As mentioned in EPA's October 16, 2012, and March 26, 2013, final rulemakings, since North Carolina met the deadline to provide the corrective SIP revision, the conditional approval remains in effect until EPA concludes its action on the corrective SIP revision. This proposed action is to disapprove North Carolina's September 5, 2013, SIP submittal (i.e., the corrective SIP) in relation to the baseline for the $PM_{2.5}$ PSD increment – a critical component for the State's NSR program. Thus, EPA is proposing to convert EPA's previous conditional approval of these PSD elements of North Carolina's 1997 $PM_{2.5}$ and 2006 $PM_{2.5}$ NAAQS infrastructure SIP submittals to a partial approval and a partial disapproval for the $PM_{2.5}$ increment component.

V. Incorporation by Reference

In this rulemaking, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference the portions of North Carolina's regulations 15A NCAC

02D .0530 and 15A NCAC 02D .0531, entitled "Prevention of Significant Deterioration" and "Sources in Nonattainment Areas," respectively, that EPA is proposing to approve herein. EPA is not proposing to incorporate provisions for which the Agency is proposing to disapprove. EPA has made, and will continue to make, these documents generally available electronically through www.regulations.gov and/or in hard copy at the EPA Region 4 office (see the ADDRESSES section of this preamble for more information).

VI. Proposed Actions

EPA is proposing to approve, in part, and disapprove, in part, changes to the North Carolina SIP, provided by the NC DEQ, to EPA on May 16, 2011, (two submittals) and September 5, 2013. These changes modify North Carolina's NSR – PSD and NNSR – permitting regulations codified at 15A 02D .0530 – *Prevention of Significant Deterioration* and 15A NCAC 02D.0531 – *Sources in Nonattainment Areas*, and include the adoption of some federal requirements respecting implementation of the $PM_{2.5}$ NAAQS through the NSR permitting program. Specifically, EPA is proposing to approve the State's changes as they relate to the requirements to comply with EPA's 2008 $PM_{2.5}$ NSR Rule and the State's miscellaneous changes as described in Section II.C of this proposed rulemaking. EPA is proposing to disapprove North Carolina's September 5, 2013, SIP submittal as it relates to the requirements to comply with EPA's 2010 PSD $PM_{2.5}$ Rule. If EPA finalizes all of the actions proposed in today's notice, the versions of 15A NCAC 02D .0530 (PSD) and 15A NCAC 02D .0531 (NNSR) that became effective in the state on September 1, 2013, will be incorporated into North Carolina's SIP, with the exception of the portions of paragraphs 15A NCAC 02D .0530(e), (q), and (v) that pertain to $PM_{2.5}$ increments. EPA's proposed disapproval of North Carolina's September 5, 2013, SIP submittal as it relates to the requirements to comply with EPA's 2010

PSD $PM_{2.5}$ Rule, if finalized, will trigger the requirement under section 110(c) for EPA to promulgate a FIP no later than two years from the date of the disapproval unless the State corrects the deficiency through a SIP revision and EPA approves the SIP revision before EPA promulgates such a FIP.

As a result of the proposed disapproval of a portion of the State's NSR requirements, EPA is proposing to disapprove the PSD elements of the North Carolina's infrastructure SIP submittals for the 2008 lead, 2008 8-hour ozone, 2010 SO_2, 2010 NO_2 and the 2012 $PM_{2.5}$ NAAQS; and is proposing to convert the Agency's previous conditional approvals of the PSD elements of North Carolina's infrastructure SIP submittals for the 1997 Annual $PM_{2.5}$ and 2006 24-hour $PM_{2.5}$ NAAQS to disapprovals. North Carolina did not submit these infrastructure SIPs to meet requirements for Part D of the CAA or a SIP call; therefore, if EPA takes final action to disapprove the PSD portions of these submittals, no sanctions will be triggered. However, if EPA finalizes this proposed disapproval action, that final action will trigger the requirement under section 110(c) for EPA to promulgate a FIP no later than two years from the date of the disapproval unless the State corrects the deficiency through a SIP revision and EPA approves the SIP revision before EPA promulgates such a FIP.

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. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submittals, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. This action approves, in part, and disapproves, in part, state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. EPA is proposing to determine that the PSD portion of some

of the aforementioned SIP submittals do not meet federal requirements. For that reason, this 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, August 10, 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).

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 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, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

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

Dated: April 29, 2016.

Heather McTeer Toney

Regional Administrator,

Region 4.

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