



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R04-OAR-2012-0773; FRL-9957-92-Region 4]

**Air Plan Approval and Air Quality Designation; KY; Redesignation of the Kentucky
Portion of the Louisville 1997 Annual PM_{2.5} Nonattainment Area to Attainment**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: On March 5, 2012, the Commonwealth of Kentucky, through the Kentucky Energy and Environment Cabinet, Division for Air Quality (DAQ), submitted a request for the Environmental Protection Agency (EPA) to redesignate the portion of Kentucky that is within the bi-state Louisville, KY-IN fine particulate matter (PM_{2.5}) nonattainment area (hereafter referred to as the “bi-state Louisville Area” or “Area”) to attainment for the 1997 Annual PM_{2.5} national ambient air quality standards (NAAQS) and to approve a state implementation plan (SIP) revision containing a maintenance plan for the Area. EPA is proposing to approve the Commonwealth’s plan for maintaining the 1997 Annual PM_{2.5} NAAQS in the Area, including the motor vehicle emission budgets (MVEBs) for nitrogen oxide (NO_x) and PM_{2.5} for the years 2015 and 2025 for the bi-state Louisville Area, and incorporate it into the SIP, and to redesignate the Kentucky portion of the Area to attainment for the 1997 Annual PM_{2.5} NAAQS. EPA is also notifying the public of the status of EPA’s adequacy determination for the MVEBs for the bi-state Louisville Area.

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-2012-0773 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: Madolyn Sanchez 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. Madolyn Sanchez may be reached by phone at (404) 562-9644, or via electronic mail at sanchez.madolyn@epa.gov.

SUPPLEMENTARY INFORMATION:

Table of Contents

- I. What are the Actions EPA is Proposing to Take?**
- II. What is the Background for EPA’s Proposed Actions?**

- III. What are the Criteria for Redesignation?**
- IV. Why is EPA Proposing These Actions?**
- V. What is EPA's Analysis of the Request?**
- VI. What is the Effect of the January 4, 2013, D.C. Circuit Decision Regarding PM_{2.5} Implementation under Subpart 4?**
- VII. What is EPA's Analysis of the Proposed NO_x and PM_{2.5} MVEBs for the Bi-State Louisville Area?**
- VIII. What is the Status of EPA's Adequacy Determination for the Proposed NO_x and PM_{2.5} MVEBs for 2015 and 2025 for the Bi-State Louisville Area?**
- IX. What is the Effect of EPA's Proposed Actions?**
- X. Proposed Actions.**
- XI. Statutory and Executive Order Reviews.**
- I. What are the Actions EPA is Proposing to Take?**

EPA is proposing to take the following two separate but related actions: (1) to approve Kentucky's plan for maintaining the 1997 Annual PM_{2.5} NAAQS (maintenance plan), including the associated MVEBs for the bi-state Louisville Area, and incorporate it into the Kentucky SIP, and (2) to redesignate the Kentucky portion of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS. EPA is also notifying the public of the status of EPA's adequacy determination for the MVEBs for the bi-state Louisville Area. The bi-state Louisville Area consists of Bullitt and Jefferson Counties in Kentucky as well as Clark and Floyd Counties and a

portion of Jefferson County (Madison Township) in Indiana.¹ These proposed actions are summarized below and described in greater detail throughout this notice of proposed rulemaking.

EPA is proposing to approve Kentucky's maintenance plan for its portion of the bi-state Louisville Area as meeting the requirements of section 175A (such approval being one of the Clean Air Act (CAA or Act) criteria for redesignation to attainment status). The maintenance plan is designed to help keep the bi-state Louisville Area in attainment for the 1997 Annual PM_{2.5} NAAQS through 2025. As explained in section V below, EPA is also proposing to determine that attainment can be maintained through 2027. The maintenance plan includes 2015 and 2025 MVEBs for NO_x and direct PM_{2.5} for the bi-state Louisville Area. EPA is proposing to approve these MVEBs and incorporate them into the Kentucky SIP.

EPA also proposes to determine that the Kentucky portion of the bi-state Louisville Area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. Accordingly, in this action, EPA is proposing to approve a request to change the legal designation of Bullitt and Jefferson Counties within the Kentucky portion of the bi-state Louisville Area, as found at 40 CFR part 81, from nonattainment to attainment for the 1997 Annual PM_{2.5} NAAQS.

EPA is also notifying the public of the status of EPA's adequacy process for the 2015 and 2025 MVEBs for NO_x and PM_{2.5} for the bi-state Louisville Area. The Adequacy comment period for the MVEBs for the bi-state Louisville Area began on January 24, 2012, with EPA's posting of the availability on EPA's Adequacy website (<http://www.epa.gov/otaq/stateresources/transconf/currsips.htm>). The Adequacy comment

¹ In a separate submittal, EPA received the redesignation request and maintenance plan for the Indiana portion of this Area. On September 9, 2016, EPA took final action to determine that the entire bi-state Louisville Area has attained the 1997 PM_{2.5} standard and to approve Indiana's redesignation request and maintenance plan. *See* 81 FR 62390.

period for these MVEBs closed on February 23, 2012. No comments, adverse or otherwise, were received through the Adequacy process. Please see section VIII of this notice of proposed rulemaking for further explanation of this process and for more details on the MVEBs.

In summary, this proposed rulemaking is in response to Kentucky's March 5, 2012, redesignation request and associated SIP submission that addresses the specific issues summarized above and the necessary elements for redesignation described in section 107(d)(3)(E) of the CAA for the redesignation of the Kentucky portion of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS.

II. What is the Background for EPA's Proposed Actions?

Fine particle pollution can be emitted directly or formed secondarily in the atmosphere.² The main precursors of secondary PM_{2.5} are sulfur dioxide (SO₂), NO_x, ammonia, and volatile organic compounds (VOCs). *See* 72 FR 20586, 20589 (April 25, 2007). Sulfates are a type of secondary particle formed from SO₂ emissions from power plants and industrial facilities. Nitrates, another common type of secondary particle, are formed from NO_x emissions from power plants, automobiles, and other combustion sources.

On July 18, 1997, EPA promulgated the first air quality standards for PM_{2.5}. EPA promulgated an annual standard at a level of 15.0 micrograms per cubic meter (µg/m³), based on

² Fine particulate matter (PM_{2.5}) refers to airborne particles less than or equal to 2.5 micrometers in diameter. Although treated as a single pollutant, fine particles come from many different sources and are composed of many different compounds. In the bi-state Louisville Area, one of the largest components of PM_{2.5} is sulfate, which is formed through various chemical reactions from the precursor SO₂. The other major component of PM_{2.5} is organic carbon, which originates predominantly from biogenic emission sources. Nitrate, which is formed from the precursor NO_x, is also a component of PM_{2.5}. Crustal materials from windblown dust and elemental carbon from combustion sources are less significant contributors to total PM_{2.5}. VOCs, also precursors for PM, are emitted from a variety of sources, including motor vehicles, chemical plants, refineries, factories, consumer and commercial products, and other industrial sources. VOCs are also emitted by natural sources such as vegetation.

a 3-year average of annual mean PM_{2.5} concentrations. In the same rulemaking, EPA promulgated a 24-hour standard of 65 µg/m³, based on a 3-year average of the 98th percentile of 24-hour concentrations. On October 17, 2006 (71 FR 61144), EPA retained the annual average NAAQS at 15.0 µg/m³ but revised the 24-hour NAAQS to 35 µg/m³, based again on the 3-year average of the 98th percentile of 24-hour concentrations.³ Under EPA regulations at 40 CFR part 50, the primary and secondary 1997 Annual PM_{2.5} NAAQS are attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, Appendix N, is less than or equal to 15.0 µg/m³ at all relevant monitoring sites in the subject area averaged over a 3-year period.

On January 5, 2005, at 70 FR 944, and supplemented on April 14, 2005, at 70 FR 19844, EPA designated the bi-state Louisville Area as nonattainment for the Annual 1997 PM_{2.5} NAAQS. On November 13, 2009, at 74 FR 58688, EPA promulgated designations for the 24-hour PM_{2.5} standard established in 2006, designating the bi-state Louisville Area as attainment for that NAAQS. That action clarified that the bi-state Louisville Area was classified unclassifiable/attainment for the 24-hour NAAQS promulgated in 1997. EPA did not promulgate designations for the 2006 Annual PM_{2.5} NAAQS since that NAAQS was essentially identical to the 1997 Annual PM_{2.5} NAAQS. Therefore, the bi-state Louisville Area is designated nonattainment for the 1997 Annual PM_{2.5} NAAQS, and this proposed action only addresses this designation.

³ In response to legal challenges of the annual standard promulgated in 2006, the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanded that NAAQS to EPA for further consideration. *See American Farm Bureau Federation and National Pork Producers Council, et al. v. EPA*, 559 F.3d 512 (D.C. Cir. 2009). However, given that the 1997 and 2006 Annual NAAQS are essentially identical, attainment of the 1997 Annual NAAQS would also indicate attainment of the remanded 2006 Annual NAAQS.

All 1997 PM_{2.5} NAAQS areas were designated under subpart 1 of title I, part D, of the CAA. Subpart 1 contains the general requirements for nonattainment areas for any pollutant governed by a NAAQS and is less prescriptive than the other subparts of title I, part D. On April 25, 2007 (72 FR 20586), EPA promulgated its Clean Air Fine Particle Implementation Rule, codified at 40 CFR part 51, subpart Z, in which the Agency provided guidance for state and tribal plans to implement the 1997 PM_{2.5} NAAQS. The United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanded the Clean Air Fine Particle Implementation Rule and the final rule entitled “Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM_{2.5})” (73 FR 28321, May 16, 2008) (collectively, “1997 PM_{2.5} Implementation Rules”) to EPA on January 4, 2013, in *Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013). The court found that EPA erred in implementing the 1997 PM_{2.5} NAAQS pursuant to the general implementation provisions of subpart 1 of part D of title I of the CAA, rather than the particulate matter-specific provisions of subpart 4 of part D of title I. The effect of the court’s ruling on this proposed redesignation action is discussed in detail in section VI of this notice.

On July 29, 2016, EPA issued a rule entitled, “Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements” (PM_{2.5} SIP Requirements Rule) that clarifies how states should meet the statutory SIP requirements that apply to areas designated nonattainment for any PM_{2.5} NAAQS under subparts 1 and 4. *See* 81 FR 58010 (August 24, 2016). It does so by establishing regulatory requirements and providing guidance that is applicable to areas that are currently designated nonattainment for existing PM_{2.5} NAAQS and areas that are designated nonattainment for any PM_{2.5} NAAQS in the future. In addition, the rule

responds to the D.C. Circuit's remand of the 1997 PM_{2.5} Implementation Rules. As a result, the requirements of the rule also govern future actions associated with states' ongoing implementation efforts for the 1997 and 2006 PM_{2.5} NAAQS. The rule also revokes the 1997 primary Annual NAAQS for areas designated as attainment for that standard because EPA revised the primary annual standard in 2012.

III. What are the Criteria for Redesignation?

The CAA provides the requirements for redesignating a nonattainment area to attainment. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation provided the following criteria are met: (1) the Administrator determines that the area has attained the applicable NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k); (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP and applicable federal air pollutant control regulations, and other permanent and enforceable reductions; (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 175A; and (5) the state containing such area has met all requirements applicable to the area under section 110 and part D of title I of the CAA.

On April 16, 1992, EPA provided guidance on redesignation in the General Preamble for the Implementation of title I of the CAA Amendments of 1990 (57 FR 13498), and the Agency supplemented this guidance on April 28, 1992 (57 FR 18070). EPA has provided further guidance on processing redesignation requests in the following documents:

1. “Procedures for Processing Requests to Redesignate Areas to Attainment,” Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (hereinafter referred to as the “Calcagni Memorandum”);
2. “State Implementation Plan (SIP) Actions Submitted in Response to Clean Air Act (CAA) Deadlines,” Memorandum from John Calcagni, Director, Air Quality Management Division, October 28, 1992; and
3. “Part D New Source Review (Part D NSR) Requirements for Areas Requesting Redesignation to Attainment,” Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, October 14, 1994.

IV. Why is EPA Proposing these Actions?

On March 5, 2012, Kentucky requested that EPA redesignate the Kentucky portion of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS.⁴ EPA’s evaluation indicates that the Kentucky portion of the bi-state Louisville Area meets the requirements for redesignation set forth in section 107(d)(3)(E), including the maintenance plan requirements under section 175A of the CAA. As a result of these proposed findings, EPA is proposing to take the two related actions summarized in section I of this notice.

V. What is EPA’s Analysis of the Request?

As stated above, in accordance with the CAA, EPA proposes to approve the 1997 Annual PM_{2.5} NAAQS maintenance plan, including the associated MVEBs, for the Kentucky portion of the bi-state Louisville Area and incorporate it into the Kentucky SIP, and redesignate the

⁴ For the reasons discussed in footnote 5, below, EPA’s proposed action on Kentucky’s redesignation request was delayed due to a technical systems audit on the PM_{2.5} laboratory in Kentucky that invalidated certain Jefferson County monitoring data collected in 2012 and 2013.

Kentucky portion of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS. The five redesignation criteria provided under CAA section 107(d)(3)(E) are discussed in greater detail for the Area in the following paragraphs of this section.

Criteria (1) - The bi-state Louisville Area has attained the 1997 Annual PM_{2.5} NAAQS

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has attained the applicable NAAQS (CAA section 107(d)(3)(E)(i)). For PM_{2.5}, an area may be considered to be attaining the 1997 Annual PM_{2.5} NAAQS if it meets the standards, as determined in accordance with 40 CFR 50.13 and Appendix N of part 50, based on three complete, consecutive calendar years of quality-assured air quality monitoring data. To attain the 1997 Annual PM_{2.5} NAAQS, the 3-year average of the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, Appendix N, must be less than or equal to 15.0 µg/m³ at all relevant monitoring sites in the subject area over a 3-year period. The relevant data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in the EPA Air Quality System (AQS) database. The monitors generally should have remained at the same location for the duration of the monitoring period required for demonstrating attainment.

On September 9, 2016, EPA determined that the bi-state Louisville Area has attained the 1997 Annual PM_{2.5} NAAQS based on 2013-2015 data.⁵ See 81 FR 62390. In that action, EPA

⁵ EPA made this determination in association with the redesignation of the Indiana portion of the Area. EPA initially proposed to redesignate that portion of the Area to attainment based on monitoring data from 2009-2011 and preliminary data from 2012. However, in August 2013, EPA issued results of a technical systems audit on the PM_{2.5} laboratory in Kentucky that invalidated the Jefferson County monitoring data for all of 2012, and a small portion of the monitoring data from 2013 (a portion of the first quarter). Because there was not enough data to support an attainment determination for the Area, EPA could not proceed with the redesignation of the bi-state Louisville Area. Kentucky began collecting valid data in early 2013 (the end of the first quarter) after the monitoring audit issues had been addressed, resulting in a valid design value for the area using 2013-2015 data.

reviewed valid PM_{2.5} monitoring data from the bi-state Louisville Area for the 1997 Annual PM_{2.5} NAAQS from 2013-2015 and determined that the design value for the Area is less than the standard of 15.0 µg/m³ for that time period. The PM_{2.5} design values for monitors with complete data are summarized in Table 1, below.⁶

Table 1 – 1997 Annual PM_{2.5} Design Values for Monitors with Complete Data in the Bi-State Louisville Area for 2013-2015

| County | Monitoring Site | 2013-2015 Design Value (µg/m ³) |
|----------------------|-----------------|---|
| Clark County, IN | 180190006 | 11.4 |
| | 180190008 | 9.3 |
| Floyd County, IN | 180431004 | 10.0 |
| Jefferson County, KY | 211110043 | 11.3 |
| | 211110051 | 11.7 |
| | 211110067 | 10.5 |

As shown in Table 1 above, the bi-state Louisville Area has a 2013-2015 design value of 11.7 µg/m³, which is below the 1997 Annual PM_{2.5} NAAQS. For this proposed action, EPA has reviewed 2016 preliminary monitoring data for the Area and proposes to find that the preliminary data does not indicate a violation of the NAAQS.⁷ EPA will not take final action to approve the redesignation if the 3-year design value exceeds the NAAQS prior to EPA finalizing the redesignation. As discussed in more detail below, Kentucky has committed to continue monitoring in the Kentucky portion of the Area in accordance with 40 CFR part 58.

⁶ See 81 FR 62390 for additional information regarding the evaluation of 2013-2015 data for the Area.

⁷ This preliminary data is available at EPA’s air data website:
http://aqedr1.epa.gov/aqswweb/aqstmp/airdata/download_files.html#Daily

Criteria (2) – Kentucky has a fully approved SIP under section 110(k) for the Kentucky portion of the bi-state Louisville Area and Criteria (5) – Kentucky has met all Applicable Requirements under Section 110 and Part D of the CAA.

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the state has met all applicable requirements under section 110 and part D of title I of the CAA (CAA section 107(d)(3)(E)(v)) and that the state has a fully approved SIP under section 110(k) for the area (CAA section 107(d)(3)(E)(ii)). EPA proposes to find that the Commonwealth has met all applicable SIP requirements for the Kentucky portion of the Area under section 110 of the CAA (general SIP requirements) for purposes of redesignation. Additionally, EPA proposes to find that the Kentucky SIP satisfies the criterion that it meets applicable SIP requirements for purposes of redesignation under part D of title I of the CAA in accordance with section 107(d)(3)(E)(v). Further, EPA proposes to determine that the SIP is fully approved with respect to all requirements applicable for purposes of redesignation in accordance with section 107(d)(3)(E)(ii). In making these determinations, EPA ascertained which requirements are applicable to the Area and, if applicable, that they are fully approved under section 110(k). SIPs must be fully approved only with respect to requirements that were applicable prior to submittal of the complete redesignation request.

a. The Kentucky portion of the bi-state Louisville Area has met all applicable requirements under section 110 and part D of the CAA.

General SIP requirements. General SIP elements and requirements are delineated in section 110(a)(2) of title I, part A of the CAA. These requirements include, but are not limited to, the following: submittal of a SIP that has been adopted by the state after reasonable public

notice and hearing; provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality; implementation of a source permit program; provisions for the implementation of part C requirements (Prevention of Significant Deterioration (PSD)) and provisions for the implementation of part D requirements (NSR permit programs); provisions for air pollution modeling; and provisions for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state. To implement this provision, EPA has required certain states to establish programs to address the interstate transport of air pollutants. The section 110(a)(2)(D) requirements for a state are not linked with a particular nonattainment area's designation and classification in that state. EPA believes that the requirements linked with a particular nonattainment area's designation and classifications are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, EPA does not believe that the CAA's interstate transport requirements should be construed to be applicable requirements for purposes of redesignation.

In addition, EPA believes that other section 110 elements that are neither connected with nonattainment plan submissions nor linked with an area's attainment status are not applicable requirements for purposes of redesignation. The area will still be subject to these requirements after the area is redesignated. The section 110 and part D requirements which are linked with a particular area's designation and classification are the relevant measures to evaluate in reviewing

a redesignation request. This approach is consistent with EPA's existing policy on applicability (i.e., for redesignations) of conformity and oxygenated fuels requirements, as well as with section 184 ozone transport requirements. *See* Reading, Pennsylvania, proposed and final rulemakings (61 FR 53174-53176, October 10, 1996), (62 FR 24826, May 7, 1997); Cleveland-Akron-Loraine, Ohio, final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida, final rulemaking at (60 FR 62748, December 7, 1995). *See also* the discussion on this issue in the Cincinnati, Ohio, redesignation (65 FR 37890, June 19, 2000), and in the Pittsburgh, Pennsylvania, redesignation (66 FR 50399, October 19, 2001).

EPA has reviewed Kentucky's SIP and has preliminarily concluded that it meets the general SIP requirements under section 110(a)(2) of the CAA to the extent they are applicable for purposes of redesignation. EPA has previously approved provisions of Kentucky's SIP addressing CAA section 110(a)(2) requirements including provisions addressing the 1997 Annual PM_{2.5} NAAQS. *See* 77 FR 60307 (October 3, 2012) and 79 FR 26143 (May 7, 2014). These requirements are, however, statewide requirements that are not linked to the PM_{2.5} nonattainment status of the Area. Therefore, EPA believes these SIP elements are not applicable for purposes of this redesignation.

Title I, part D, subpart 1 applicable SIP requirements. EPA proposes to determine that the Kentucky SIP meets the applicable SIP requirements for the Kentucky portion of the Area for purposes of redesignation under part D of the CAA. Subpart 1 of part D, comprised of sections 172-179B of the CAA, sets forth the basic nonattainment requirements applicable to all nonattainment areas. All areas that were designated nonattainment for the 1997 Annual PM_{2.5} NAAQS were designated under subpart 1 of the CAA. For purposes of evaluating this

redesignation request, the applicable part D, subpart 1 SIP requirements are contained in sections 172(c)(1)-(9) and in section 176. A thorough discussion of the requirements contained in sections 172 and 176 can be found in the General Preamble for Implementation of title I. *See* 57 FR 13498 (April 16, 1992). Section VI of this proposed rulemaking notice discusses the relationship between this proposed redesignation action and subpart 4 of part D.

Subpart 1, section 172 Requirements. Under section 172, states with nonattainment areas must submit plans providing for timely attainment and meeting a variety of other requirements. EPA's longstanding interpretation of the nonattainment planning requirements of section 172 is that once an area is attaining the NAAQS, those requirements are not "applicable" for purposes of CAA section 107(d)(3)(E)(ii) and therefore need not be approved into the SIP before EPA can redesignate the area. In the 1992 General Preamble for Implementation of Title I, EPA set forth its interpretation of applicable requirements for purposes of evaluating redesignation requests when an area is attaining a standard. *See* 57 FR 13498, 13564 (April 16, 1992). EPA noted that the requirements for reasonable further progress (RFP) and other measures designed to provide for attainment do not apply in evaluating redesignation requests because those nonattainment planning requirements "have no meaning" for an area that has already attained the standard. *Id.* This interpretation was also set forth in the Calcagni Memorandum. EPA's understanding of section 172 also forms the basis of its Clean Data Policy, which suspends a state's obligation to submit most of the attainment planning requirements that would otherwise apply, including an attainment demonstration and planning SIPs to provide for RFP, reasonably available control measures (RACM), and contingency measures under section 172(c)(9).

On March 9, 2011, EPA determined that the bi-state Louisville Area had attained the 1997 annual PM_{2.5} NAAQS based upon ambient air monitoring data for the 2007-2009 period, which showed that the area had monitored attainment of the annual PM_{2.5} NAAQS. As a result of this determination and in accordance with EPA's Clean Data Policy, the requirements for the area to submit an attainment demonstration and associated RACM, a RFP plan, contingency measures, and other planning SIP revision related to attainment of the standards are suspended for so long as the area continues to attain the 1997 annual PM_{2.5} NAAQS.⁸ Therefore, Kentucky withdrew the aforementioned PM_{2.5} attainment demonstration SIP revision except for the portion addressing emissions inventory requirements under section 172(c)(3). However, as discussed below, the United States Court of Appeals for the Sixth Circuit (Sixth Circuit) recently issued an opinion in *Sierra Club v. EPA*, 793 F.3d 656 (6th Cir. 2015), that is inconsistent with EPA's longstanding interpretation regarding section 107(d)(3)(E)(ii) and requires that subpart 1 RACM be approved into the SIP before EPA can redesignate an area subject to section 172(c)(1).

Section 172(c)(1) requires the plans for all nonattainment areas to provide for the implementation of RACM as expeditiously as practicable and to provide for attainment of the NAAQS. EPA interprets this requirement to impose a duty on all nonattainment areas to consider all available control measures and to adopt and implement such measures as are reasonably available for implementation in each area as components of the area's attainment demonstration.

⁸ At the time of EPA's March 9, 2011 action, EPA's Clean Data Policy for PM_{2.5} was codified at 40 CFR 51.1004(c). This regulation was promulgated as part of the 1997 PM_{2.5} NAAQS implementation rule that was subsequently challenged and remanded in *NRDC v. EPA*, 706 F.3d 428 (D.C. Cir. 2013), as discussed in Section VI of this notice. However, the Clean Data Policy portion of the implementation rule was not at issue in that case. In the PM_{2.5} SIP Requirements Rule, EPA updated the Clean Data Policy for the PM_{2.5} NAAQS and moved it to 40 CFR 51.1015.

On July 14, 2015, the Sixth Circuit vacated EPA's redesignation of the Indiana and Ohio portions of the Cincinnati nonattainment area for the 1997 PM_{2.5} NAAQS because EPA had not approved RACM for that area into the Indiana and Ohio SIPs pursuant to CAA section 172(c)(1). *Sierra Club v. EPA*, 793 F.3d 656. The Court concluded that "a State seeking redesignation 'shall provide for the implementation' of RACM/RACT [reasonably available control technology], even if those measures are not strictly necessary to demonstrate attainment with the PM_{2.5} NAAQS. If the State has not done so, EPA cannot 'fully approve' the area's SIP, and redesignation to attainment status is improper." *Sierra Club*, 793 F.3d at 670. EPA is bound by the Sixth Circuit's decision within the Court's jurisdiction.⁹

On August 9, 2016, Kentucky submitted a SIP revision containing a RACM determination for the Kentucky portion of the Louisville Area, in accordance with CAA 172(c)(1) and the Sixth Circuit decision in *Sierra Club*, for incorporation into the Kentucky SIP in support of the Commonwealth's redesignation request. Although EPA continues to believe that subpart 1 RACM is not an applicable requirement under section 107(d)(3)(E) for an area that has already attained the 1997 Annual PM_{2.5} NAAQS, on October 21, 2016, EPA proposed to approve Kentucky's SIP revision to incorporate the subpart 1 RACM determination for the Kentucky portion of the Area into the SIP.¹⁰ *See* 81 FR 72755. EPA did not receive any adverse comments on the proposal, and on December 15, 2016, the EPA Region 4 Regional

⁹ Kentucky, Michigan, Ohio, and Tennessee are located within the Sixth Circuit's jurisdiction.

¹⁰ The EPA Region 4 Regional Administrator signed a memorandum on July 20, 2015, seeking concurrence from the Director of EPA's Air Quality Policy Division (AQPD) in the Office of Air Quality Planning and Standards to act inconsistent with EPA's interpretation of CAA sections 107(d)(3)(E) and 172(c)(1) when taking action on pending and future redesignation requests in Kentucky and Tennessee because the Region is bound by the Sixth Circuit's decision in *Sierra Club v. EPA*. The AQPD Director issued her concurrence on July 22, 2015. This memorandum is not required to satisfy EPA's regional consistency regulations. *See* 40 CFR 56.5(b)(1); 81 FR 51102 (August 3, 2016).

Administrator took final action to approve Kentucky's subpart 1 RACM determination SIP submission. Publication in the Federal Register is pending.

Because attainment has been reached in the Area, the section 172(c)(2) requirement that nonattainment plans contain provisions promoting reasonable further progress toward attainment is not relevant for purposes of redesignation. In addition, because the Area has attained the standard and is no longer subject to a RFP requirement, the requirement to submit the section 172(c)(9) contingency measures is not applicable for purposes of redesignation. Section 172(c)(6) requires the SIP to contain control measures necessary to provide for attainment of the NAAQS. Because attainment has been reached, no additional measures are needed to provide for attainment.

Section 172(c)(3) requires submission and approval of a comprehensive, accurate, and current inventory of actual emissions. On August 2, 2012 (77 FR 45956), EPA approved Kentucky's 2002 base-year emissions inventory for the bi-state Louisville Area.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources to be allowed in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA has determined that, since PSD requirements will apply after redesignation, areas being redesignated need not comply with the requirement that a NSR program be approved prior to redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, "Part D New Source Review Requirements for Areas

Requesting Redesignation to Attainment.” The Commonwealth has demonstrated that the Kentucky portion of the bi-state Louisville Area will be able to maintain the NAAQS without part D NSR in effect, and therefore Kentucky need not have fully approved part D NSR programs prior to approval of the redesignation request. Kentucky’s PSD program will become effective in the Kentucky portion of the bi-state Louisville Area upon redesignation to attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, EPA believes that the Kentucky SIP meets the requirements of section 110(a)(2) applicable for purposes of redesignation.

176 Conformity Requirements. Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that federally-supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine conformity applies to transportation plans, programs and projects that are developed, funded or approved under title 23 of the United States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other federally-supported or funded projects (general conformity). State transportation conformity SIP revisions must be consistent with federal conformity regulations relating to consultation, enforcement and enforceability that EPA promulgated pursuant to its authority under the CAA.

EPA believes that it is reasonable to interpret the conformity SIP requirements¹¹ as not applying for purposes of evaluating the redesignation request under section 107(d) because state

¹¹ CAA section 176(c)(4)(E) requires states to submit revisions to their SIPs to reflect certain Federal criteria and procedures for determining transportation conformity. Transportation conformity SIPs are different from the MVEBs that are established in control strategy SIPs and maintenance plans.

conformity rules are still required after redesignation and federal conformity rules apply where state rules have not been approved. *See Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001) (upholding this interpretation); *See* 60 FR 62748 (December 7, 1995). Nonetheless, Kentucky has an approved conformity SIP for the bi-state Louisville Area. *See* 75 FR 20780 (April 21, 2010).

For these reasons, EPA proposes to find that Kentucky has satisfied all applicable requirements for purposes of redesignation of the Area under section 110 and part D of the CAA.

b. The Kentucky portion of the Area has a fully approved applicable SIP under section 110(k) of the CAA.

EPA has fully approved the applicable Kentucky SIP for the Kentucky portion of the bi-state Louisville Area for the 1997 Annual PM_{2.5} nonattainment area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation. EPA may rely on prior SIP approvals in approving a redesignation request (*see* Calcagni Memorandum at p. 3; *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984 (6th Cir. 1998); *Wall*, 265 F.3d 426) plus any additional measures it may approve in conjunction with a redesignation action. *See* 68 FR 25426 (May 12, 2003) and citations therein. Following passage of the CAA of 1970, Kentucky has adopted and submitted, and EPA has fully approved at various times, provisions addressing the various SIP elements applicable for the 1997 Annual PM_{2.5} NAAQS in the Kentucky portion of the bi-state Louisville Area (e.g., 77 FR 60307, October 3, 2012).

As indicated above, EPA believes that the section 110 elements not connected with nonattainment plan submissions and not linked to an area's nonattainment status are not applicable requirements for purposes of redesignation.

Criteria (3) - The air quality improvement in the bi-state Louisville Area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and applicable federal air pollution control regulations and other permanent and enforceable reductions.

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and applicable federal air pollution control regulations and other permanent and enforceable reductions (CAA section 107(d)(3)(E)(iii)). EPA has preliminarily determined that Kentucky has demonstrated that the observed air quality improvement in the Kentucky portion of the bi-state Louisville Area is due to permanent and enforceable reductions in emissions resulting from implementation of the SIP and federal measures.

Federal measures enacted in recent years have resulted in permanent emission reductions in particulate matter and its precursors. The federal measures that have been implemented include:

Tier 2 vehicle standards and low-sulfur gasoline. Implementation of the Tier 2 vehicle standards began in 2004, and as newer, cleaner cars enter the national fleet, these standards continue to significantly reduce NO_x emissions. The standards require all classes of passenger vehicles in any manufacturer's fleet to meet an average standard of 0.07 grams of NO_x per mile. In addition, starting in January of 2006, the Tier 2 rule reduced the allowable sulfur content of gasoline to 30 parts per million (ppm). Most gasoline sold prior to this had a sulfur content of approximately 300 ppm. EPA expects that these standards will reduce NO_x emissions from

vehicles by approximately 74 percent by 2030, translating to nearly 3 million tons annually by 2030.

Heavy-duty gasoline and diesel highway vehicle standards & ultra low-sulfur diesel rule.

On October 6, 2000 (65 FR 59896), EPA promulgated a rule to reduce NO_x and VOC emissions from heavy-duty gasoline and diesel highway vehicles that began to take effect in 2004. On January 18, 2001 (66 FR 5002), EPA promulgated a second phase of standards and testing procedures which began in 2007 to reduce particulate matter from heavy-duty highway engines and reduced the maximum highway diesel fuel sulfur content from 500 ppm to 15 ppm. The total program should achieve a 90 percent reduction in PM emissions and a 95 percent reduction in NO_x emissions for new engines using low-sulfur diesel, compared to existing engines using higher-content sulfur diesel. EPA expects that this rule will reduce NO_x emissions by 2.6 million tons by 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.

Non-road, large spark-ignition engines and recreational engines standards. The non-road spark-ignition and recreational engine standards, effective in July 2003, regulate NO_x, hydrocarbons, and carbon monoxide from groups of previously unregulated non-road engines. These engine standards apply to large spark-ignition engines (e.g., forklifts and airport ground service equipment), recreational vehicles (e.g., off-highway motorcycles and all-terrain-vehicles), and recreational marine diesel engines sold in the United States and imported after the effective date of these standards. When all of the non-road spark-ignition and recreational engine standards are fully implemented, an overall 72 percent reduction in hydrocarbons, 80

percent reduction in NO_x, and 56 percent reduction in carbon monoxide emissions are expected by 2020. These controls help reduce ambient concentrations of PM_{2.5}.

Large non-road diesel engine standards. This rule, which applies to diesel engines used in industries such as construction, agriculture, and mining, was promulgated in 2004 and fully phased in by 2014. This rule reduced allowable non-road diesel fuel sulfur levels from approximately 3,000 ppm to 500 ppm in 2007 and further reduced those levels to 15 ppm starting in 2010 (a 99 percent reduction). This rule also achieved significant reductions of up to 90 percent for NO_x and particulate matter emissions nationwide.

NO_x SIP Call. On October 27, 1998 (63 FR 57356), EPA issued the NO_x SIP Call requiring the District of Columbia and 22 states to reduce emissions of NO_x, a precursor to ozone and PM_{2.5} pollution, and providing a mechanism (the NO_x Budget Trading Program) that states could use to achieve those reductions. Affected states were required to comply with Phase I of the SIP Call beginning in 2004 and Phase II beginning in 2007. By the end of 2008, ozone season NO_x emissions from sources subject to the NO_x SIP Call dropped by 62 percent from 2000 emissions levels. All NO_x SIP Call states, including Kentucky, have SIPs that currently satisfy their obligations under the NO_x SIP Call, and EPA will continue to enforce the requirements of the NO_x SIP Call.

Reciprocating internal combustion engine National Emissions Standards for Hazardous Air Pollutants (NESHAP). In 2010, EPA issued rules regulating emissions of air toxics from existing compression ignition (CI) and spark ignition (SI) stationary reciprocating internal combustion engines (RICE) that meet specific site rating, age, and size criteria. With these RICE standards fully implemented in 2013, EPA estimates that the CI RICE standards reduce PM_{2.5}

emissions from the covered CI engines by approximately 2,800 tons per year (tpy) and VOC emissions by approximately 27,000 tpy and that the SI RICE standards reduce NOx emissions from the covered SI engines by approximately 96,000 tpy.

Category 3 marine diesel engine standards. Promulgated in 2010, this rule establishes more stringent exhaust emission standards for new large marine diesel engines with per cylinder displacement at or above 30 liters (commonly referred to as Category 3 compression-ignition marine engines) as part of a coordinated strategy to address emissions from all ships that effect U.S. air quality. Near-term standards for newly built engines applied beginning in 2011, and long-term standards requiring an 80 percent reduction in NOx emissions will begin in 2016.

Boiler NESHAP. The NESHAP for industrial, commercial, and institutional boilers is projected to reduce VOC emissions. This NESHAP applies to boiler and process heaters located at major sources of hazardous air pollutants that burn natural gas, fuel oil, coal, biomass, refinery gas, or other gas and had a compliance deadline of January 31, 2016.

Utility Mercury Air Toxics Standards (MATS) and New Source Performance Standards (NSPS). The MATS for coal and oil-fired electric generation units (EGUs) and the NSPS for fossil-fuel-fired electric utility steam generating units were published on February 16, 2012 (77 FR 9304). The purpose is to reduce mercury and other toxic air pollutant emissions from coal and oil-fired EGUs, 25 megawatts or more, that generate electricity for sale and distribution through the national electric grid to the public. The NSPS has revised emission standards for NOx, SO₂, and particulate matter (PM) that apply to new coal and oil-fired power plants. The MATS compliance date for existing sources was April 16, 2015.

CAIR and CSAPR. In its redesignation request and maintenance plan, the Commonwealth identified the Clean Air Interstate Rule (CAIR) as a permanent and enforceable measure that contributed to attainment in the bi-state Louisville Area. CAIR created regional cap-and-trade programs to reduce SO₂ and NO_x emissions in 27 eastern states, including Kentucky, that contributed to downwind nonattainment or interfered with maintenance of the 1997 8-hour ozone NAAQS and the 1997 PM_{2.5} NAAQS. *See* 70 FR 25162 (May 12, 2005). EPA approved a revision to Kentucky's SIP on October 4, 2007 (72 FR 56623), that addressed the requirements of CAIR for the purpose of reducing SO₂ and NO_x emissions. By 2008, the beginning of the attainment time period identified by Kentucky, CAIR had been promulgated and was achieving emission reductions.

In 2008 the D.C. Circuit initially vacated CAIR, *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded the rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, *North Carolina v. EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008). On August 8, 2011 (76 FR 48208), acting on the D.C. Circuit's remand, EPA promulgated the Cross-State Air Pollution Rule (CSAPR) to replace CAIR and thus to address the interstate transport of emissions contributing to nonattainment and interfering with maintenance of the two air quality standards covered by CAIR as well as the 2006 PM_{2.5} NAAQS. CSAPR requires substantial reductions of SO₂ and NO_x emissions from EGUs in 28 states in the Eastern United States. As a general matter, because CSAPR is CAIR's replacement, emissions reductions associated with CAIR will for most areas be made permanent and enforceable through implementation of CSAPR.

Numerous parties filed petitions for review of CSAPR in the D.C. Circuit, and on August 21, 2012, the court issued its ruling, vacating and remanding CSAPR to EPA and ordering continued implementation of CAIR. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 38 (D.C. Cir. 2012). The D.C. Circuit's vacatur of CSAPR was reversed by the United States Supreme Court on April 29, 2014, and the case was remanded to the D.C. Circuit to resolve remaining issues in accordance with the high court's ruling. *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014). On remand, the D.C. Circuit affirmed CSAPR in most respects, but invalidated without vacating some of the Phase 2 SO₂ and NO_x ozone season CSAPR budgets as to a number of states. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (D.C. Cir. 2015) (*EME Homer City II*). The CSAPR budgets for Kentucky are not affected by the Court's decision. The litigation over CSAPR ultimately delayed implementation of that rule for three years, from January 1, 2012, when CSAPR's cap-and-trade programs were originally scheduled to replace the CAIR cap-and-trade programs, to January 1, 2015. CSAPR's Phase 2 budgets were originally promulgated to begin on January 1, 2014, and are now scheduled to begin on January 1, 2017. CSAPR will continue to operate under the existing emissions budgets until EPA fully addresses the D.C. Circuit's remand. The Court's decision did not affect Kentucky's CSAPR emissions budgets; therefore, CSAPR ensures that the NO_x and SO₂ emissions reductions associated with CAIR and CSAPR throughout Kentucky are permanent and enforceable.¹² Although Kentucky identified CAIR as a measure that contributed to permanent and enforceable emissions reductions, the air quality modeling analysis conducted

¹² CAIR and CSAPR established annual NO_x and SO₂ budgets to address nonattainment and interference with maintenance of the PM_{2.5} standard, because, as discussed above in Section II, NO_x and SO₂ are two main PM_{2.5} precursors.

for CSAPR demonstrates that the bi-state Louisville Area would be able to attain the 1997 annual PM_{2.5} NAAQS even in the absence of either CAIR or CSAPR. *See* “Air Quality Modeling Final Rule Technical Support Document,” App. B, pages B-43, B-45 and B-46. This modeling is available in the docket for this proposed redesignation action.

To the extent that bi-state Louisville relies on CSAPR for maintenance of the standard, EPA has identified the bi-state Louisville Area as having been significantly impacted by pollution transported from other states in both CAIR and CSAPR, and these rules greatly reduced the tons of SO₂ and NO_x emission generated in the states upwind of the area. The air quality modeling performed for the CSAPR rulemaking identified the following states as having contributed to PM_{2.5} concentrations in the bi-state Louisville Area: Illinois, Indiana, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, Tennessee, West Virginia and Wisconsin. *See* 76 FR 48208 (August 8, 2011). Even though the first phase of CAIR implementation for SO₂ did not begin until 2010, many sources began reducing their emissions well in advance of the first compliance deadline because of the incentives offered by CAIR for early compliance with the rule. The emission reductions in the states upwind of the bi-state Louisville Area achieved by CAIR, and made permanent by CSAPR, are unaffected by the D.C. Circuit’s remand of CSAPR.¹³

In addition to the above federal measures, Kentucky also identified the following State control measures, incorporated into Kentucky’s SIP, that provide emission reductions in particulate matter and its precursors:

¹³ The D.C. Circuit in *EME Homer City II* remanded the SO₂ trading program budgets for four states, none of which were identified as contributing to the bi-state Louisville Area.

New Process Operations – 401 KAR 59:010. This regulation provides for the control of particulate matter emissions for affected facilities or sources located in nonattainment areas as well as attainment areas.

RACT/RACM – 401 KAR 50.012. This regulation establishes reasonably available control technology requirements for all air contaminant sources.

Open Burning Bans – 401 KAR 63:005. In 2005, Kentucky revised the open burning regulation to prohibit most types of open burning in PM_{2.5} nonattainment/maintenance areas within Kentucky during the period of May-September.

Fugitive Emissions – 401 KAR 63:010. This regulation provides for the control of fugitive emissions in the Commonwealth.

Criteria (4) - The Kentucky portion of the bi-state Louisville Area has a fully approved maintenance plan pursuant to section 175A of the CAA.

For redesignating a nonattainment area to attainment, the CAA requires EPA to determine that the area has a fully approved maintenance plan pursuant to section 175A of the CAA (CAA section 107(d)(3)(E)(iv)). In conjunction with its request to redesignate the Kentucky portion of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS, Kentucky submitted a SIP revision to provide for the maintenance of the 1997 Annual PM_{2.5} NAAQS for at least 10 years after the effective date of redesignation to attainment. EPA believes that this maintenance plan meets the requirements for approval under section 175A of the CAA for the reasons discussed below.

a. *What is required in a maintenance plan?*

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least 10 years after the Administrator approves a redesignation to attainment. Eight years after the redesignation, the Commonwealth of Kentucky must submit a revised maintenance plan demonstrating that attainment will continue to be maintained for the 10 years following the initial 10-year period. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency measures, as EPA deems necessary, to assure prompt correction of any future 1997 Annual PM_{2.5} NAAQS violations. The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance plan should address five requirements: the attainment emissions inventory, maintenance demonstration, monitoring, verification of continued attainment, and a contingency plan. As is discussed below, EPA finds that the Commonwealth's maintenance plan includes all the necessary components and is thus proposing to approve it as a revision to the Kentucky SIP.

b. Attainment Emissions Inventory

As discussed above, EPA has previously determined that the bi-state Louisville Area attained the 1997 Annual PM_{2.5} NAAQS based on monitoring data for the 3-year period from 2007-2009, and then subsequently based on monitoring data from 2013-2015. In its maintenance plan, the Commonwealth selected 2008 as the attainment emission inventory year. The attainment inventory identifies the level of emissions in the Area that is sufficient to attain the 1997 Annual PM_{2.5} NAAQS. The Commonwealth began development of the attainment inventory by first generating a baseline emissions inventory for the Area. As noted above, the

year 2008 was chosen as the base year for developing a comprehensive emissions inventory for direct PM_{2.5} and the PM_{2.5} precursors SO₂ and NO_x. The projected inventory included with the maintenance plan estimates emissions forward to 2015 and 2025, which satisfies the 10-year interval required in section 175(A) of the CAA.

The emissions inventories are composed of four major types of sources: point, area, on-road mobile, and non-road mobile. The attainment and future year emissions inventories were projected by the Visibility Improvement State and Tribal Association of the Southeast and the Lake Michigan Air Directors Consortium using the 2005 base year inventory methodology as provided in the Appendix D of Kentucky's submittal. The future year emissions inventories have been estimated using projected rates of growth in population, traffic, economic activity, expected control programs, and other parameters. Non-road mobile emissions estimates were based on EPA's non-road mobile model, with the exception of the railroad locomotives, commercial marine, and aircraft. On-road mobile source emissions were calculated using EPA's MOVES2010 on-road mobile emission model.¹⁴ The 2008 SO₂, NO_x, and PM_{2.5} emissions for the Kentucky portion of the bi-state Louisville Area and the entire bi-state Louisville Area, as well as the emissions for other years, were developed consistent with EPA guidance and are summarized in Tables 8 and 9.

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the Area "for at least 10 years after the redesignation." EPA has interpreted this as a showing of maintenance "for a period of ten years following redesignation." Calcagni Memorandum, p. 9. Where the emissions inventory method

¹⁴ MOVES2010 was the approved model at the time the Kentucky SIP was submitted. Currently, MOVES2014a is the approved on-road mobile source model.

of showing maintenance is used, the purpose is to show that emissions during the maintenance period will not increase over the attainment year inventory. Calcagni Memorandum, pp. 9–10.

As discussed in detail below, Kentucky’s maintenance plan submission expressly documents that the Area’s overall emissions inventories will remain well below the attainment year inventories through 2025. In addition, for the reasons set forth below, EPA believes that the Area will continue to maintain the 1997 Annual PM_{2.5} NAAQS through 2027. Thus, if EPA finalizes its proposed approval of the redesignation request and maintenance plan, the approval will be based upon this showing, in accordance with section 175A, and EPA’s analysis described herein, that the Commonwealth’s maintenance plan provides for maintenance for at least ten years after redesignation.

c. Maintenance Demonstration

The maintenance plan for the Kentucky portion of the bi-state Louisville Area includes a maintenance demonstration that:

- (i) Shows compliance with and maintenance of the Annual PM_{2.5} standard by providing information to support the demonstration that current and future emissions of SO₂, NO_x, and PM_{2.5} remain at or below 2008 emissions levels.
- (ii) Uses 2008 as the attainment year and includes future emission inventory projections for 2015 and 2025.
- (iii) Identifies an “out year” at least 10 years after EPA review and potential approval of the maintenance plan. Per 40 CFR part 93, NO_x and PM_{2.5} MVEBs were established for the last year (2025) of the maintenance plan. Additionally, Kentucky chose, through

interagency consultation, to establish NOx and PM_{2.5} MVEBs for 2015 (see section VII below).

(iv) Provides, as shown in Tables 2 through 7 below, the estimated and projected emissions inventories, in tpy, for the Kentucky portion of the Louisville (Bullitt¹⁵ and Jefferson Counties) Area, for PM_{2.5}, NOx, and SO₂. Kentucky incorporated expected CAIR reductions into the Commonwealth's redesignation request inventories and projections regarding NOx and SO₂ but did not incorporate CAIR reductions into the PM_{2.5} inventory.

Table 2. Bullitt County, Kentucky PM_{2.5} Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – without CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|---------------|----------------------|----------------------------|-------------------------|-----------------------------|
| EGU Point | 0 | 0 | 0 | 0 |
| Non-EGU | 186.67 | 259.07 | 428.02 | 669.37 |
| Non-road | 42.13 | 39.86 | 29.09 | 12.39 |
| Area | 812.93 | 822.39 | 855.23 | 895.91 |
| On-road | 84.08 | 85.40 | 55.96 | 27.72 |
| Total | 1125.81 | 1206.72 | 1368.3 | 1605.39 |

Table 3. Jefferson County, Kentucky PM_{2.5} Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – without CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|---------------|----------------------|----------------------------|-------------------------|-----------------------------|
| EGU Point | 3,123.24 | 2,763.06 | 2,481.90 | 2,481.90 |
| Non-EGU | 604.24 | 640.00 | 568.43 | 479.96 |
| Non-road | 579.53 | 571.03 | 212.51 | 124.16 |
| Area | 550.70 | 496.28 | 440.65 | 371.92 |
| On-road | 721.30 | 627.06 | 339.41 | 177.60 |

¹⁵ Based upon an email from John E. Gowins, Kentucky Division of Air Quality, dated October 31, 2012, the Bullitt County 2025 emission inventory values for the Non-EGU sector were incorrect in the March 5, 2012, redesignation request submittal. The values presented in Tables 2, 4, and 6, as well as projected total emission estimates Tables 8 and 9, have been changed to reflect the correct values. This email is located in the docket for this proposed action.

| | | | | |
|-------|----------|----------|----------|----------|
| Total | 5,579.01 | 5,097.43 | 4,042.90 | 3,635.54 |
|-------|----------|----------|----------|----------|

Table 4. Bullitt County, Kentucky NO_x Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – with CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|-----------|--------------|--------------------|-----------------|---------------------|
| EGU Point | 0 | 0 | 0 | 0 |
| Non-EGU | 221.70 | 288.40 | 444.04 | 666.38 |
| Non-road | 540.19 | 502.71 | 385.51 | 210.99 |
| Area | 29.92 | 8.72 | 1.42 | 1.09 |
| On-road | 2,952.07 | 2,820.80 | 1,782.71 | 866.81 |
| Total | 3,743.88 | 3,620.63 | 2,613.68 | 1745.27 |

Table 5. Jefferson County, Kentucky NO_x Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – with CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|-----------|--------------|--------------------|-----------------|---------------------|
| EGU Point | 20,176.48 | 22,749.14 | 21,595.85 | 22,221.35 |
| Non-EGU | 1,489.68 | 1,987.01 | 1,759.66 | 1,479.63 |
| Non-road | 10,590.84 | 11,255.08 | 9,912.27 | 8,269.43 |
| Area | 1,272.69 | 1,382.23 | 1,217.32 | 1,015.56 |
| On-road | 22,241.72 | 19,094.05 | 10,259.60 | 4,935.49 |
| Total | 55,771.41 | 56,467.51 | 44,744.70 | 37,921.46 |

Table 6. Bullitt County, Kentucky SO₂ Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – with CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|-----------|--------------|--------------------|-----------------|---------------------|
| EGU Point | 0 | 0 | 0 | 0 |
| Non-EGU | 365.91 | 507.16 | 836.74 | 1307.58 |
| Non-road | 32.05 | 14.28 | 3.29 | 0.76 |
| Area | 94.94 | 96.47 | 98.41 | 100.36 |
| On-road | 12.11 | 13.28 | 15.01 | 15.76 |
| Total | 505.01 | 631.19 | 953.45 | 1424.46 |

Table 7. Jefferson County, Kentucky SO₂ Emission Inventory; Totals for Base Year 2005, Estimated 2008, and Projected 2015 and 2025 (tpy) – with CAIR

| Sector | 2005 Base | 2008 Attainment | 2015 Interim | 2025 Maintenance |
|---------------|------------------|------------------------|---------------------|-------------------------|
| EGU Point | 42,852.96 | 38,684.02 | 38,684.02 | 38,684.02 |
| Non-EGU | 1,894.40 | 2,080.95 | 2,080.95 | 2,080.95 |
| Non-road | 714.33 | 778.68 | 960.48 | 1,297.16 |
| Area | 0.00 | 0.00 | 0.00 | 0.00 |
| On-road | 95.26 | 101.00 | 102.55 | 100.43 |
| Total | 45,556.95 | 41,644.65 | 41,828.00 | 42,162.56 |

Table 8. Actual (2008) and Projected Total Emission Estimates for the Kentucky Portion of the Bi-State Louisville Area (tpy)

| Year | PM_{2.5} | NO_x | SO₂ |
|-----------------------------------|-------------------------|-----------------------|-----------------------|
| 2008 | 6,304.15 | 60,088.14 | 42,275.84 |
| 2015 | 5,411.20 | 47,358.38 | 42,781.45 |
| 2025 | 5,240.93 | 39,666.73 | 43,587.02 |
| Decrease from 2008 to 2025 | 1,063.22 | 20,421.41 | -1,311.18 |

Table 9. Actual (2008) and Projected Total Emission Estimates for the Entire Bi-State Louisville Area (tpy)

| Year | PM_{2.5} | NO_x | SO₂ |
|-----------------------------------|-------------------------|-----------------------|-----------------------|
| 2008 | 7,506.62 | 97,614.20 | 151,648.36 |
| 2015 | 6,521.57 | 70,147.12 | 77,397.48 |
| 2025 | 6,294.86 | 58,635.36 | 76,929.92 |
| Decrease from 2008 to 2025 | 1,211.76 | 38,978.84 | 74,718.44 |

In situations where local emissions are the primary contributor to nonattainment, such as the bi-state Louisville Area, if the future projected emissions in the nonattainment area remain at

or below the baseline emissions in the nonattainment area, then the ambient air quality standard should not be exceeded in the future. As reflected above in Table 9, future emissions of all the relevant pollutants in the bi-state Louisville Area are expected to be well below the “attainment level” emissions in 2008, thus illustrating that the bi-state Louisville Area is expected to continue to attain the 1997 PM_{2.5} NAAQS through 2025 and beyond. Further, even though EPA evaluates maintenance demonstrations on an area-wide basis, EPA finds that projected emissions in only the Kentucky portion of the bi-state Louisville Area are also consistent with maintenance of the 1997 PM_{2.5} NAAQS. As reflected in Table 8, emissions of direct PM_{2.5} and NO_x in the Kentucky portion of the bi-state Louisville Area are expected to decrease from 2008 to 2025 by approximately 17 percent and 34 percent, respectively, while emissions of SO₂ are expected to increase by approximately 3 percent. Thus, the significant projected reductions in direct PM_{2.5} and NO_x indicate that future emissions in the Kentucky portion of the bi-state Louisville Area are expected to support continued maintenance of the 1997 Annual PM_{2.5} NAAQS through 2025.

A maintenance plan requires the state to show that projected future year emissions will not exceed the level of emissions which led the Area to attain the NAAQS. Kentucky has projected emissions as described previously and determined that emissions in the bi-state Louisville Area will remain below those in the attainment year inventory for the duration of the maintenance plan.

While DAQ’s maintenance plan projects maintenance of the 1997 Annual PM_{2.5} NAAQS through 2025, as noted above, EPA believes that the bi-state Louisville Area will continue to maintain the standard through 2027 for several reasons: all of the federal regulatory requirements that enabled the Area to attain the NAAQS will continue to be in effect and enforceable after the

10-year maintenance period; the most recent maximum potential annual PM_{2.5} design value (for the period 2013-2015) for the Area, 11.7 µg/m³, is well below the standard of 15.0 µg/m³; and overall emissions are projected to decline significantly through 2025. Because it is unlikely that emissions will suddenly increase in 2026 and 2027 in an amount that results in overall emissions in the area exceeding attainment year inventory levels, EPA expects that the bi-state Louisville Area will continue maintain the 1997 Annual PM_{2.5} NAAQS through at least 2027.

d. Monitoring Network

There are currently four monitors in Jefferson County measuring PM_{2.5} in the Kentucky portion of the bi-state Louisville Area. The Commonwealth of Kentucky, through DAQ, has committed to continue operation of the monitors in the Kentucky portion of the bi-state Louisville Area in compliance with 40 CFR part 58 and have thus addressed the requirement for monitoring. EPA approved Kentucky's 2015 monitoring plan on October 28, 2015.

e. Verification of Continued Attainment

The Commonwealth of Kentucky, through DAQ, has the legal authority to enforce and implement the requirements of the Kentucky portion of the bi-state Louisville Area 1997 Annual PM_{2.5} maintenance plan. This includes the authority to adopt, implement, and enforce any subsequent emissions control contingency measures determined to be necessary to correct future PM_{2.5} attainment problems.

DAQ will track the progress of the maintenance plan by performing future reviews of triennial emission inventories for the Kentucky portion of the bi-state Louisville Area as required in the Air Emissions Reporting Rule (AERR). Emissions information will be compared to the

2008 attainment year and the 2025 projected maintenance year inventories to assess emission trends, as necessary, and to assure continued compliance with the annual PM_{2.5} standard.

f. Contingency Measures in the Maintenance Plan

Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to assure that a state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation, and a time limit for action by the Commonwealth. A state should also identify specific indicators to be used to determine when the contingency measures need to be implemented. The maintenance plan must include a requirement that a state will implement all measures with respect to control of the pollutant that were contained in the SIP before redesignation of the area to attainment in accordance with section 175A(d).

In the March 5, 2012, submittal, Kentucky commits to maintaining the existing control measures identified in Chapter 5 of its submission (addressing section 107(d)(3)(E)(v)) after redesignation. The contingency plan included in the submittal identifies triggers to determine when contingency measures are needed and a process of developing and implementing appropriate control measures. The Commonwealth will use actual ambient monitoring data to determine whether a trigger event has occurred and when contingency measures should be implemented.

In the event of a monitored violation of the 1997 Annual PM_{2.5} NAAQS in the Area, the Commonwealth commits to adopt one or more of the following control measures within nine

months of the monitored violation in order to bring the Area into compliance and to implement the control measure(s) within 18 months of the monitored violation:

- Implementation of a program to require additional emissions reductions on stationary sources;
- Implementation of fuel programs, including incentives for alternative fuels;
- Restriction of certain roads or lanes, or construction of such lanes for use by passenger buses or high-occupancy vehicles;
- Trip-reduction ordinances;
- Employer-based transportation management plans, including incentives;
- Programs to limit or restrict vehicle use in downtown areas, or other areas of emission concentration, particularly during periods of peak use;
- Programs for new construction and major reconstruction of paths or tracks for use by pedestrians or by non-motorized vehicles when economically feasible and in the public interest;
- Diesel reduction emissions strategies, including diesel retrofit programs;
- Any other control program that is developed and deemed to be more advantageous for the Area.

In the event that a measured value of the weighted annual arithmetic mean, as determined in accordance with 40 CFR part 50, Appendix N, is $15.5 \mu\text{g}/\text{m}^3$ or greater in a single calendar year in any portion of the Area, the Commonwealth will evaluate existing controls measures to determine whether any further emission reduction measures should be implemented at that time.

In addition to the triggers indicated above, Kentucky will monitor regional emissions through the AERR and compare them to the projected inventories and the attainment year inventory.

EPA preliminarily concludes that the maintenance plan adequately addresses the five basic components of a maintenance plan: attainment emission inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan. Therefore, EPA proposes to find that the maintenance plan SIP revision submitted by the Commonwealth for the Kentucky portion of the bi-state Louisville Area meets the requirements of section 175A of the CAA and is approvable.

VI. What is the Effect of the January 4, 2013, D.C. Circuit Decision Regarding PM_{2.5} Implementation under Subpart 4?

a. Background

As discussed in section II of this action, the D.C. Circuit remanded the 1997 PM_{2.5} Implementation Rule to EPA on January 4, 2013, in *Natural Resources Defense Council v. EPA*, 706 F.3d 428. The court found that EPA erred in implementing the 1997 PM_{2.5} NAAQS pursuant to the general implementation provisions of subpart 1 of part D of Title I of the CAA, rather than the particulate matter-specific provisions of subpart 4 of part D of Title I.

For the purposes of evaluating Kentucky's redesignation request for its portion of the bi-state Louisville Area, to the extent that implementation under subpart 4 would impose additional requirements for areas designated nonattainment, EPA believes that those requirements are not "applicable" for the purposes of CAA section 107(d)(3)(E), and thus EPA is not required to consider subpart 4 requirements with respect to the redesignation of the Kentucky portion of the bi-state Louisville Area. Under its longstanding interpretation of the CAA, EPA has interpreted

section 107(d)(3)(E) to mean, as a threshold matter, that the part D provisions which are “applicable” and which must be approved in order for EPA to redesignate an area include only those which came due prior to a state’s submittal of a complete redesignation request. *See* “Procedures for Processing Requests to Redesignate Areas to Attainment,” Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (Calcagni memorandum). *See also* “State Implementation Plan (SIP) Requirements for Areas Submitting Requests for the plan and Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards (NAAQS) on or after November 15, 1992,” Memorandum from Michael Shapiro, Acting Assistant Administrator, Air and Radiation, September 17, 1993 (Shapiro memorandum); Final Redesignation of Detroit-Ann Arbor, (60 FR 12459, 12465-66, March 7, 1995); Final Redesignation of St. Louis, Missouri, (68 FR 25418, 25424-27, May 12, 2003); *Sierra Club v. EPA*, 375 F.3d 537, 541 (7th Cir. 2004) (upholding EPA’s redesignation rulemaking applying this interpretation and expressly rejecting Sierra Club’s view that the meaning of “applicable” under the statute is “whatever should have been in the plan at the time of attainment rather than whatever actually was in already implemented or due at the time of attainment”).¹⁶ In this case, at the time that Kentucky submitted its redesignation request on March 5, 2012, requirements under subpart 4 were not due, and indeed, were not yet known to apply.

On June 2, 2014, EPA published a rule entitled “Identification of Nonattainment Classification and Deadlines for Submission of State Implementation Plan (SIP) Provisions for

¹⁶ Applicable requirements of the CAA that come due subsequent to the area’s submittal of a complete redesignation request remain applicable until a redesignation is approved, but are not required as a prerequisite to redesignation. Section 175A(c) of the CAA.

the 1997 Fine Particle (PM_{2.5}) National Ambient Air Quality Standard (NAAQS) and 2006 PM_{2.5} NAAQS” (“Classification and Deadlines Rule”). *See* 79 FR 31566. In that rule, the Agency responded to the D.C. Circuit’s January 2013 decision by establishing classifications for PM_{2.5} nonattainment areas under subpart 4, and by establishing a new SIP submission date of December 31, 2014, for moderate area attainment plans and for any additional attainment-related or nonattainment new source review plans necessary for areas to comply with the requirements applicable under subpart 4. *Id.* at 31,567-70. Therefore, when Kentucky submitted its request in March 2012, the deadline for submitting a SIP to meet the Act’s subpart 4 requirements had not yet passed, and those requirements are therefore not applicable for purposes of evaluating Kentucky’s request for redesignation.

b. Subpart 4 Requirements and the Kentucky’s Redesignation Request its Portion of the Bi-State Louisville Area

Even though the substantive requirements of subpart 4 were not applicable requirements that Kentucky was required to have met at the time of its redesignation request submission, EPA believes that even the imposition of those substantive requirements would not pose a bar to the redesignation of the Kentucky portion of the bi-state Louisville Area. The additional requirements found in subpart 4 are either designed to help an area achieve attainment (also known as “attainment planning requirements”) or are related to new source permitting. None of these additional requirements are applicable for purposes of evaluating a redesignation from nonattainment to attainment under EPA’s long-standing interpretation of CAA section 107(d)(3)(E)(ii) and (v).

As background, EPA notes that subpart 4 incorporates components of subpart 1 of part D, which contains general air quality planning requirements for areas designated as nonattainment. *See* section 172(c). Subpart 4 itself contains specific planning and scheduling requirements for PM₁₀¹⁷ nonattainment areas, and under the Court’s January 4, 2013, decision in *NRDC v. EPA*, these same statutory requirements also apply for PM_{2.5} nonattainment areas.¹⁸ In the General Preamble, EPA’s longstanding general guidance interpreting the 1990 amendments to the CAA, EPA discussed the relationship of subpart 1 and subpart 4 SIP requirements and pointed out that subpart 1 requirements were to an extent “subsumed by, or integrally related to, the more specific PM-10 requirements.” *See* 57 FR 13538 (April 16, 1992). The subpart 1 requirements include, among other things, provisions for attainment demonstrations, RACM, RFP, emissions inventories, and contingency measures.

As noted above, in the Classification and Deadlines Rule, EPA initially classified all areas designated nonattainment for either the 1997 or the 2006 PM_{2.5} NAAQS as “moderate” nonattainment areas. Additional requirements that would apply to the bi-state Louisville Area as a moderate nonattainment area are therefore sections 189(a) and (c), including the following: (1) an approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions for

¹⁷ PM₁₀ refers to particles nominally 10 micrometers in diameter or smaller.

¹⁸ In explaining their decision, the court reasoned that the plain meaning of the CAA requires implementation of the 1997 PM_{2.5} NAAQS under subpart 4 because PM_{2.5} particles fall within the statutory definition of PM₁₀ and are thus subject to the same statutory requirements. EPA finalized its interpretation of subpart 4 requirements as applied to the PM_{2.5} NAAQS in its final rule entitled “Air Quality State Implementation Plans; Approvals and Promulgations: Fine Particulate Matter National Ambient Air Quality Standards” (81 FR 58010, August 24, 2016).

RACM (section 189(a)(1)(C)); and (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)).¹⁹

The permit requirements of subpart 4, as contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM₁₀, without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose for redesignation purposes any additional requirements for moderate areas beyond those contained in subpart 1.²⁰ In any event, in the context of redesignation, EPA has long relied on the interpretation that a fully approved nonattainment new source review program is not considered an applicable requirement for redesignation, provided the area can maintain the standard with a PSD program after redesignation. A detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled “Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment.” *See also* rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

With respect to the specific attainment planning requirements under subpart 4,²¹ EPA applies the same interpretation that it applies to attainment planning requirements under subpart 1 or any of other pollutant-specific subparts. That is, under its long-standing interpretation of the

¹⁹ EPA’s final implementation rule (81 FR 58010, August 24, 2016) includes, among other things, the Agency’s interpretation of these moderate area requirements for purposes of PM_{2.5} NAAQS implementation.

²⁰ The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating this redesignation is discussed below.

²¹ These planning requirements include the attainment demonstration, quantitative milestone requirements, and RACM analysis.

CAA, where an area is already attaining the standard, EPA does not consider those attainment-planning requirements to be applicable for purposes of evaluating a request for redesignation because requirements that are designed to help an area achieve attainment no longer have meaning where an area is already meeting the standard.

Thus, at the time of Kentucky's submission of its redesignation request, the requirement for the bi-state Louisville Area to comply with subpart 4 had not yet come due and was, therefore, not applicable for purposes of EPA's evaluation of the redesignation. Moreover, even if Kentucky had been required to comply with those subpart 4 requirements, the additional substantive requirements for a moderate nonattainment area under subpart 4 were not applicable for purposes of redesignation anyway, given EPA's long-standing interpretation of the applicability of certain requirements to areas that are attaining the NAAQS.

c. *Subpart 4 and Control of PM_{2.5} Precursors*

As noted previously, EPA does not believe that the requirement to comply with subpart 4 applied to Kentucky's redesignation request for its portion of the bi-state Louisville Area because that request was submitted prior to the moderate area SIP submission date of December 31, 2014. However, even if the requirements of subpart 4 were to apply to the Area, EPA nevertheless believes that the additional requirements of subpart 4 would not pose an obstacle to our approval of the request to redesignate the Kentucky portion of the bi-state Louisville Area. Specifically, EPA proposes to determine that, because the bi-state Louisville Area is attaining the standard, no additional controls of any PM_{2.5} precursors would be required. Under either subpart 1 or subpart 4, for purposes of demonstrating attainment as expeditiously as practicable, a state is required to evaluate all economically and technologically feasible control measures for direct PM

emissions and precursor emissions, and adopt those measures that are deemed reasonably available. Relevant precursors to PM_{2.5} pollution include SO₂, NO_x, VOCs, and ammonia. Moreover, CAA section 189(e) in subpart 4 specifically provides that control requirements for major stationary sources of direct PM₁₀ shall also apply to PM₁₀ precursors from those sources, except where EPA determines that major stationary sources of such precursors “do not contribute significantly to PM₁₀ levels which exceed the standard in the area.”

Under subpart 1 and EPA’s prior implementation rule, all major stationary sources of PM_{2.5} precursors were subject to regulation, with the exception of ammonia and VOCs. Thus, assuming subpart 4 requirements are applicable for purposes of evaluating this redesignation request, EPA is analyzing here whether additional controls of ammonia and VOCs from major stationary sources are required under section 189(e) of subpart 4 in order to redesignate the area for the 1997 PM_{2.5} standard. As explained below, EPA does not believe that any additional controls of ammonia and VOCs are required in the context of this redesignation.

In the General Preamble, EPA discusses its approach to implementing section 189(e). *See* 57 FR 13538 (April 16, 1992). With regard to precursor regulation under section 189(e), the General Preamble explicitly states that control of VOCs under other Act requirements may suffice to relieve a state from the need to adopt precursor controls under section 189(e). *See* 57 FR 13542. EPA in this rulemaking proposes to determine that even if not explicitly addressed by Kentucky in its submission, the Commonwealth does not need to take further action with respect to ammonia and VOCs as precursors to satisfy the requirements of section 189(e). This proposed determination is based on our findings that: (1) the bi-state Louisville Area contains no major stationary sources of ammonia, and (2) existing major stationary sources of VOCs are adequately

controlled under other provisions of the CAA regulating the ozone NAAQS.²² In the alternative, EPA proposes to determine that, under the express exception provisions of section 189(e), and in the context of the redesignation of the area, which is attaining the 1997 annual PM_{2.5} standard, at present ammonia and VOC precursors from major stationary sources do not contribute significantly to levels exceeding the 1997 PM_{2.5} standard in the bi-state Louisville Area. *See* 57 FR 13539.

As noted earlier, EPA determined in March 2011 (76 FR 12860) and September 2011 (76 FR 55544) that the bi-state Louisville Area was attaining the 1997 Annual PM_{2.5} NAAQS and that the Area had attained the NAAQS by the applicable attainment date of April 5, 2010. Under EPA's regulations, a determination of attainment, also known as a clean data determination, suspends the CAA's requirements to submit an attainment demonstration, including an analysis of reasonably available control measures and control technology; reasonable further progress; and contingency measures. Under subpart 4, Kentucky's plan for attaining the 1997 PM_{2.5} NAAQS in the bi-state Louisville Area would have had to consider all PM_{2.5} precursors, including VOCs and ammonia, and whether there were control measures, including for existing sources under section 189(e), available that would have advanced the area's attainment goals. However, because the bi-state Louisville Area has already attained the 1997 PM_{2.5} NAAQS, the Commonwealth's requirement to submit a plan demonstrating how the Area would attain has been suspended, and, moreover, the Area has shown that it has attained with its current approach to regulation of PM_{2.5} precursors. Therefore, EPA believes that it is reasonable to conclude in

²²The bi-state Louisville Area has reduced VOC emissions through the implementation of various control programs including VOC Reasonably Available Control Technology (RACT) regulations and various on-road and non-road motor vehicle control programs.

the context of this redesignation that there is no need to revisit the attainment control strategy with respect to the treatment of precursors. In addition, as noted below, EPA has analyzed projections of VOC and ammonia emissions in the area and has determined that VOC emissions are projected to decrease by over 8,000 tpy from 2007-2020 and ammonia emissions, which are emitted in marginal amounts in the bi-state Louisville Area, are projected to decrease by approximately 5 tpy. Accordingly, EPA does not view the January 4, 2013, decision of the Court as precluding redesignation of the bi-state Louisville Area to attainment for the 1997 Annual PM_{2.5} NAAQS. In sum, even if Kentucky were required to address precursors for the bi-state Louisville Area under subpart 4 rather than under subpart 1, EPA would still conclude that the Area had met all applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii) and (v).

f. Maintenance Plan and Evaluation of Precursors

EPA proposes to determine that the Commonwealth's maintenance plan shows continued maintenance of the standard by tracking the levels of the precursors whose control brought about attainment of the 1997 Annual PM_{2.5} standard in the bi-state Louisville Area. EPA therefore believes that the only additional consideration related to the maintenance plan requirements that results from the court's January 4, 2013, decision is that of assessing the potential role of VOCs and ammonia in demonstrating continued maintenance in this area. As explained below, based upon documentation provided by Kentucky and supporting information, EPA believes that the maintenance plan for the bi-state Louisville Area need not include any additional emission reductions of VOCs or ammonia in order to provide for continued maintenance of the standard.

First, as noted above in EPA’s discussion of section 189(e), VOC emission levels in this area have historically been well-controlled under SIP requirements related to ozone and other pollutants. Second, total ammonia emissions throughout the bi-state Louisville Area are projected to be approximately 2,000 tpy in 2020. *See* Table 10, below. This amount of ammonia emissions is relatively low in comparison to the individual amounts of SO₂, NO_x, and direct PM_{2.5} emissions from sources in the Area. Third, as described below, available information shows that no precursor, including VOCs and ammonia, is expected to increase over the maintenance period so as to interfere with or undermine the State’s maintenance demonstration.

The emissions inventories used in the regulatory impact analysis (RIA) for the 2012 PM_{2.5} NAAQS, included in the docket for today’s action, show that VOC emissions are projected to decrease by 8,148.91 tpy and ammonia emissions are projected to decrease by 5.22 tpy in the Area between 2007 and 2020. *See* Table 10, below. Thus, emissions of VOCs are projected to decrease by 20 percent, and emissions of ammonia are projected to remain about the same, decreasing by less than one percent.

Table 10. Comparison of 2007 and 2020 VOC and Ammonia Emission Totals by Source Sector (tpy) for the Area²³

| Sector | VOC | | | Ammonia | | |
|-----------------|-----------|-----------|------------|----------|----------|------------|
| | 2007 | 2020 | Net Change | 2007 | 2020 | Net Change |
| Nonpoint | 15,300.78 | 15,110.61 | -190.17 | 1,308.11 | 1,386.18 | 78.07 |
| Nonroad | 4,369.3 | 2,397.67 | -1,971.63 | 7.57 | 8.96 | 1.39 |
| Onroad | 9,533.65 | 3,613.66 | -5,919.99 | 474.46 | 264.95 | -209.51 |
| Point | 12,487.7 | 12,420.58 | -67.12 | 182.13 | 306.96 | 124.83 |
| Total | 41,691.43 | 33,542.52 | -8,148.91 | 1,972.27 | 1,967.05 | -5.22 |

²³ These emissions estimates were taken from the emissions inventories developed for the RIA for the 2012 PM_{2.5} NAAQS. Table includes the entire bi-state KY-IN area.

While the RIA emissions inventories are only projected out to 2020, there is no reason to believe that this downward trend would not continue through 2027. Given that the bi-state Louisville Area is already attaining the 1997 PM_{2.5} NAAQS even with the current level of emissions from sources in the Area, the overall trend of emissions inventories is consistent with continued attainment.

In addition, available air quality data and modeling analysis show continued maintenance of the standard during the maintenance period. As noted above, the bi-state Louisville Area has an annual PM_{2.5} design value of 11.7 µg/m³ during 2013-2015, the most recent three years available with quality-assured and certified ambient air monitoring data. This is well below the 1997 Annual PM_{2.5} NAAQS of 15.0 µg/m³. Moreover, the modeling analysis conducted for RIA for the 2012 PM_{2.5} NAAQS indicates that the design value for this area is expected to continue to decline through 2020. In the RIA analysis, the 2020 modeled design value for all counties in the bi-state Louisville Area is projected to be 9.8 µg/m³. Given the decrease in overall precursor emissions projected through 2025, and expected through 2027, it is reasonable to conclude that the monitored PM_{2.5} concentrations in this area will also continue to decrease through 2025.

Thus, EPA believes that there is ample justification to conclude that the bi-state Louisville Area should be redesignated, even taking into consideration the emissions of VOCs and ammonia potentially relevant to PM_{2.5}. After consideration of the D.C. Circuit's January 4, 2013, decision, and for the reasons set forth in this notice, EPA continues to propose approval of Kentucky's maintenance plan and its request to redesignate the bi-state Louisville Area to attainment for the 1997 PM_{2.5} NAAQS.

VII. What is EPA’s Analysis of the Proposed NO_x and PM_{2.5} MVEBs for the Bi-State Louisville Area?

Under section 176(c) of the CAA, new transportation plans, programs, and projects, such as the construction of new highways, must “conform” to (i.e., be consistent with) the part of a state’s air quality plan that addresses pollution from cars and trucks. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS or any interim milestones. If a transportation plan does not conform, most new projects that would expand the capacity of roadways cannot go forward. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of such transportation activities to a SIP. The regional emissions analysis is one, but not the only, requirement for implementing transportation conformity. Transportation conformity is a requirement for nonattainment and maintenance areas. Maintenance areas are areas that were previously nonattainment for a particular NAAQS but have since been redesignated to attainment with an approved maintenance plan for that NAAQS.

Under the CAA, states are required to submit, at various times, control strategy SIPs and maintenance plans for nonattainment areas. These control strategy SIPs (including RFP and attainment demonstration) and maintenance plans create MVEBs for criteria pollutants and/or their precursors to address pollution from cars and trucks. Per 40 CFR part 93, a MVEB must be established for the last year of the maintenance plan. A state may adopt MVEBs for other years as well. The MVEB is the portion of the total allowable emissions in the maintenance demonstration that is allocated to highway and transit vehicle use and emissions. *See* 40 CFR

93.101. The MVEB serves as a ceiling on emissions from an area's planned transportation system. The MVEB concept is further explained in the preamble to the November 24, 1993, Transportation Conformity Rule (58 FR 62188). The preamble also describes how to establish the MVEB in the SIP and how to revise the MVEB.

After interagency consultation with the transportation partners for the bi-state Louisville Area, Kentucky has elected to develop MVEBs for NO_x and PM_{2.5} for the entire Area. Kentucky developed these MVEBs, as required, for the last year of its maintenance plan, 2025. Kentucky also established MVEBs for the interim year of 2015. The MVEBs reflect the total on-road emissions for 2015 and 2025, plus an allocation from the available NO_x and PM_{2.5} safety margin. Under 40 CFR 93.101, the term "safety margin" is the difference between the attainment level (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. The safety margin can be allocated to the transportation sector; however, the total emissions must remain below the attainment level. The NO_x and PM_{2.5} MVEBs and allocation from the safety margin were developed in consultation with the transportation partners and were added to account for uncertainties in population growth, changes in model vehicle miles traveled, and new emission factor models. The interagency consultation group approved a 15 percent safety margin for direct PM_{2.5} mobile source emission estimates for the years 2015 and 2025, and a 15 percent safety margin for NO_x mobile source emission estimates for the years 2015 and 2025.²⁴ The NO_x and PM_{2.5} MVEBs for the bi-state Louisville Area are defined in Table 11, below.

²⁴ The amount of the allocation for the safety margin is actually 15 percent of the PM_{2.5} and NO_x mobile emissions for 2015 and 2025. The actual percentage of the available safety margin for PM_{2.5} for 2015 and 2025 is 6.40 and

Table 11. Motor Vehicle Emissions Budget for the Bi-State Louisville Area (tpy)

| | PM_{2.5} | NOx |
|---------------------------------|-------------------------|------------------|
| 2015 Mobile Emissions | 504.95 | 15,392.13 |
| 2015 Safety Margin Allocation | 75.74 | 2,308.82 |
| 2015 Total Mobile Budget | 580.69 | 17,700.95 |
| 2025 Mobile Emissions | 281.77 | 8,097.18 |
| 2025 Safety Margin Allocated | 42.27 | 1,214.58 |
| 2025 Total Mobile Budget | 324.04 | 9,311.76 |

As mentioned above, Kentucky has chosen to allocate a portion of the available safety margin for the bi-state Louisville Area to the NOx and PM_{2.5} MVEBs for 2015 and 2025. The NOx safety margin allocations are 2,308.82 tpy and 1,214.58 tpy for 2015 and 2025, respectively, and the remaining safety margins for NOx for years 2015 and 2025 are 25,288.46 tpy and 36,869.20 tpy, respectively. The PM_{2.5} safety margin allocations are 75.74 tpy and 42.27 tpy for 2015 and 2025, respectively, and the remaining safety margins for PM_{2.5} for years 2015 and 2025 are 1,107.98 tpy and 1,626.12 tpy, respectively.

Through this rulemaking, EPA is proposing to approve into the Kentucky SIP the MVEBs for NOx and PM_{2.5} for 2015 and 2025 for the bi-state Louisville Area because EPA has determined that the Area maintains the 1997 Annual PM_{2.5} NAAQS with the emissions at the levels of the budgets. If the MVEBs for the bi-state Louisville Area are approved or found adequate (whichever is completed first), they must be used for future conformity determinations.

2.53, respectively. The actual percentage of the available safety margin for NOx for 2015 and 2025 is 8.37 and 3.19, respectively.

After thorough review, EPA is proposing to approve the budgets because they are consistent with maintenance of the 1997 Annual PM_{2.5} NAAQS through 2027.

VIII. What is the Status of EPA’s Adequacy Determination for the Proposed NOx and PM_{2.5} MVEBs for 2015 and 2025 for the Bi-State Louisville Area?

When reviewing submitted “control strategy” SIPs or maintenance plans containing MVEBs, EPA may affirmatively find the MVEBs contained therein adequate for use in determining transportation conformity. Once EPA affirmatively finds that the submitted MVEBs is adequate for transportation conformity purposes, that MVEBs must be used by state and federal agencies in determining whether proposed transportation projects conform to the SIP as required by section 176(c) of the CAA.

EPA’s substantive criteria for determining adequacy of a MVEBs are set out in 40 CFR 93.118(e)(4). The process for determining adequacy consists of three basic steps: public notification of a SIP submission, a public comment period, and EPA’s adequacy determination. This process for determining the adequacy of submitted MVEBs for transportation conformity purposes was initially outlined in EPA’s May 14, 1999, guidance, “Conformity Guidance on Implementation of March 2, 1999, Conformity Court Decision.” EPA adopted regulations to codify the adequacy process in the Transportation Conformity Rule Amendments for the “New 8-Hour Ozone and PM_{2.5} National Ambient Air Quality Standards and Miscellaneous Revisions for Existing Areas; Transportation Conformity Rule Amendments - Response to Court Decision and Additional Rule Change,” on July 1, 2004 (69 FR 40004). Additional information on the adequacy process for transportation conformity purposes is available in the proposed rule

entitled, “Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes,” 68 FR 38974, 38984 (June 30, 2003).

As discussed earlier, Kentucky’s maintenance plan submission includes NO_x and PM_{2.5} MVEBs for the bi-state Louisville Area for 2015 and 2025, the last year of the maintenance plan. EPA reviewed the NO_x and PM_{2.5} MVEBs through the adequacy process described in Section I.

EPA intends to make its determination on the adequacy of the 2015 and 2025 MVEBs for the bi-state Louisville Area for transportation conformity purposes in the near future by completing the adequacy process that was started on January 24, 2012. If EPA finds these MVEBs adequate or takes final action to approve them into the Kentucky SIP, these new MVEBs for NO_x and PM_{2.5} must be used for future transportation conformity determinations until such time that the 1997 PM_{2.5} NAAQS is consider revoked for this Area. EPA’s most recently promulgated PM_{2.5} implementation rule provides that the 1997 PM_{2.5} NAAQS will be revoked for any area that is redesignated for the NAAQS upon the effective date of that redesignation. In the meanwhile, for required regional emissions analysis years between 2015 and 2024, the applicable budgets will be the new 2015 MVEBs established in the maintenance plan. For years 2025 and beyond, the applicable budgets will be the new 2025 MVEB.

IX. What is the Effect of EPA’s Proposed Actions?

EPA’s proposed actions establish the basis upon which EPA may take final action on the issues being proposed for approval. Approval of Kentucky’s redesignation request would change the legal designation of Bullitt and Jefferson Counties in Kentucky for the 1997 Annual PM_{2.5} NAAQS, found at 40 CFR part 81, from nonattainment to attainment. Approval of Kentucky’s associated SIP revision would also incorporate a plan for maintaining the 1997

Annual PM_{2.5} NAAQS in the Area through 2025 into the Kentucky SIP. This maintenance plan includes contingency measures to remedy any future violations of the 1997 Annual PM_{2.5} NAAQS and procedures for evaluation of potential violations. The maintenance plan also includes NO_x and PM_{2.5} MVEBs for the bi-state Louisville Area. The proposed NO_x and PM_{2.5} MVEBs for 2025 for the bi-state Louisville Area are 9,311.76 tpy and 324.04 tpy, respectively. Kentucky also chose to establish an interim year MVEBs for 2015 of 17,700.95 tpy and 580.69 tpy for NO_x and PM_{2.5}, respectively.

X. Proposed Actions.

EPA is proposing to: 1) approve the maintenance plan for the Kentucky portion of the bi-state Louisville Area, including the PM_{2.5} and NO_x MVEBs for 2015 and 2025 for the entire bi-state Louisville Area, and incorporate it into the Kentucky SIP, and 2) approve Kentucky's redesignation request for the 1997 PM_{2.5} NAAQS for the Kentucky portion of the bi-state Louisville Area. Further as part of this proposed action, EPA is also describing the status of its adequacy determination for the PM_{2.5} and NO_x MVEBs for 2015 and 2025 in accordance with 40 CFR 93.118(f)(1).

If finalized, approval of the redesignation request would change the official designation of Bullitt and Jefferson Counties in Kentucky for the 1997 Annual PM_{2.5} NAAQS, found at 40 CFR part 81 from nonattainment to attainment, as found at 40 CFR part 81.

XI. Statutory and Executive Order Reviews.

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed

by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission 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 submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these proposed actions merely approve Commonwealth law as meeting federal requirements and do not impose additional requirements beyond those imposed by state law. For that reason, these proposed actions:

- are not significant regulatory actions subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January, 21, 2011);
- do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- are 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.*);
- do 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);
- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- are 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
- will not have disproportionate human health or environmental effects 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 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 of tribal governments or preempt tribal law.

List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

40 CFR Part 81

Environmental protection, Air pollution control.

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

Dated: December 23, 2016.

Heather McTeer Toney

Regional Administrator,

Region 4.

[FR Doc. 2017-00324 Filed: 1/10/2017 8:45 am; Publication Date: 1/11/2017]