6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R05-OAR-2016-0135; FRL-9957-18-Region 5]

Air Plan Approval; Indiana; Redesignation of the Indiana portion of the Cincinnati, Ohio-Kentucky-Indiana Area to Attainment of the 2008 Ozone Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to find that the Cincinnati, Ohio-Kentucky-Indiana area is attaining the 2008 ozone National Ambient Air Quality Standard (NAAQS or standard) and to approve a request from the Indiana Department of Environmental Management (IDEM) to redesignate the Indiana portion of the Cincinnati area to attainment for the 2008 ozone NAAQS because the request meets the statutory requirements for redesignation under the Clean Air Act (CAA or Act). The Cincinnati area includes Lawrenceburg Township in Dearborn County, Indiana; Butler, Clermont, Clinton, Hamilton, and Warren Counties in Ohio; and, Boone, Campbell, and Kenton Counties in Kentucky. IDEM submitted this request on February 23, 2016, and supplemented that submittal with a revised emissions inventory on May 4, 2016. EPA is also proposing to approve, as a revision to the Indiana State Implementation Plan

(SIP), the state's plan for maintaining the 2008 ozone standard through 2030 in the Cincinnati area. Additionally, EPA finds adequate and is proposing to approve the state's 2020 and 2030 volatile organic compound (VOC) and oxides of nitrogen (NO_X) Motor Vehicle Emission Budgets (MVEBs) for the Indiana and Ohio portion of the Cincinnati area. Finally, EPA is proposing to approve the 2011 base year emissions inventory submitted by IDEM as meeting the base year emissions inventory requirement of the CAA for the Indiana portion of the Cincinnati 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-R05-OAR-2016-0135 at http://www.regulations.gov or via email to aburano.douglas@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, 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, please contact the person identified in the "For Further Information Contact" section. For 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: Eric Svingen, Environmental Engineer, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353-4489, svingen.eric@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

Indiana portion of the area have a fully approved SIP under section 110(k) of the CAA?

1. Indiana has met all applicable requirements of section 110 and part D of the CAA applicable to the Indiana portion of the Cincinnati area for purposes of redesignation.

2. The Indiana portion of the Cincinnati area has a fully approved SIP for purposes of redesignation under section 110(k) of the CAA.

C. Are the air quality improvements in the Cincinnati area due to permanent and enforceable emission reductions?

1. Permanent and enforceable emission controls implemented.

2. Emission reductions.

3. Meteorology.

D. Does Indiana have a fully approvable ozone maintenance plan for the Cincinnati area?

1. Attainment inventory.

2. Has the state documented maintenance of the ozone standard in the Cincinnati area?

3. Continued air quality monitoring.

4. Verification of continued attainment.

5. What is the contingency plan for the Cincinnati area?

V. Has the state adopted approvable motor vehicle emission budgets?

A. Motor vehicle emission budgets.

I. What are the actions EPA is proposing?

EPA is proposing to take several related actions. EPA is proposing to determine that the Cincinnati nonattainment area is attaining the 2008 ozone standard, based on quality-assured and certified monitoring data for 2013-2015 and that the Indiana portion of this area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. EPA is thus proposing to approve IDEM's request to change the legal designation of the Indiana portion of the Cincinnati area from nonattainment to attainment for the 2008 ozone standard. EPA is also proposing

to approve, as a revision to the Indiana SIP, the state's maintenance plan (such approval being one of the CAA criteria for redesignation to attainment status) for the area. The maintenance plan is designed to keep the Cincinnati area in attainment of the 2008 ozone NAAQS through 2030. Finally, EPA finds adequate and is proposing to approve the newly-established 2020 and 2030 MVEBs for the Indiana and Ohio portion of the Cincinnati area. The adequacy comment period for the MVEBs began on July 22, 2016, with EPA's posting of the availability of the submittal on EPA's Adequacy website (at http://www.epa.gov/otaq/stateresources/transconf/adequacy.htm). The adequacy comment period for these MVEBs ended on August 22, 2016. EPA did not receive any requests for this submittal, or adverse comments on this submittal during the adequacy comment period. In a letter dated August 23, 2016, EPA informed IDEM that we found the 2020 and 2030 MVEBs to be adequate for use in transportation conformity analyses. On September 27, 2016 (81 FR 66271), EPA published a notice of adequacy announcing this same finding. Please see section V. B. of this preamble, "What is the status of EPA's adequacy determination for the proposed VOC and NO_X MVEBs for the Indiana portion of the Cincinnati area," for further explanation of this process. Therefore, we find adequate, and are proposing to approve, the States' 2020 and 2030 MVEBs for transportation conformity purposes.

On June 1, 2016, Indiana submitted a separate SIP revision to address emissions statements requirements, as discussed in section IV.B.1. of this preamble. EPA is taking action on the emissions statements SIP revision in a separate rulemaking. EPA will not finalize this redesignation rulemaking without an earlier or simultaneous final approval of the separate emissions statements rulemaking.

II. What is the background for these actions?

EPA has determined that ground-level ozone is detrimental to human health. On March 12, 2008, EPA promulgated a revised ozone NAAQS of 0.075 parts per million (ppm). See 73 FR 16436 (March 27, 2008). Under EPA's regulations at 40 CFR part 50, the 2008 ozone NAAQS is attained in an area when the three-year average of the annual fourth highest daily maximum 8-hour average concentration is equal to or less than 0.075 ppm, when truncated after the thousandth decimal place, at all of the ozone monitoring sites in the area. *See* 40 CFR 50.15 and appendix P to 40 CFR part 50.

Upon promulgation of a new or revised NAAQS, section 107(d)(1)(B) of the CAA requires EPA to designate as nonattainment any areas that are violating the NAAQS, based on the most recent three years of quality-assured ozone monitoring data. The Cincinnati area was designated as a marginal

nonattainment area for the 2008 ozone NAAQS on May 21, 2012 (77 FR 30088) (effective July 20, 2012).

In a final implementation rule for the 2008 ozone NAAQS (SIP Requirements Rule)[1], EPA established ozone standard attainment dates based on table 1 of section 181(a) of the CAA. This established an attainment date three years after the July 20, 2012, effective designation date for areas classified as marginal nonattainment for the 2008 ozone NAAQS. Therefore, the attainment date for the Cincinnati area was July 20, 2015. On May 4, 2016 (81 FR 26697), in accordance with section 181(b)(2)(A) of the CAA and the provisions of the SIP Requirements Rule (40 CFR 51.1103), EPA made a determination that the Cincinnati area attained the standard by its July 20, 2015, attainment date for the 2008 ozone NAAQS. EPA's determination was based upon three years of complete, quality-assured and certified data for the 2012-2014 period.

III. What are the criteria for redesignation?

Section 107(d)(3)(E) of the CAA allows redesignation of an area to attainment of the NAAQS provided that: (1) the

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[1] This rule, titled "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements" and published at 80 FR 12264 (March 6, 2015), addresses nonattainment area SIP requirements for the 2008 ozone NAAQS, including requirements pertaining to attainment demonstrations, reasonable further progress (RFP), reasonably available control technology (RACT), reasonably available control measures (RACM), new source review (NSR), emission inventories, and the timing requirements for SIP submissions and compliance with emission control measures in the SIP. This rule also addresses the revocation of the 1997 ozone NAAQS and the anti-backsliding requirements that apply when the 1997 ozone NAAQS is revoked.

Administrator (EPA) determines that the area has attained the NAAQS; (2) the Administrator has fully approved the applicable implementation plan for the area under section 110(k) of the CAA; (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, applicable Federal air pollutant control regulations, and other permanent and enforceable emission reductions; (4) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 175A of the CAA; and (5) the state containing the area has met all requirements applicable to the area for the purposes of redesignation under section 110 and part D of the CAA.

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

1. "Ozone and Carbon Monoxide Design Value Calculations," Memorandum from Bill Laxton. Director, Technical Support Division, June 18, 1990;
2. "Maintenance Plans for Redesignation of Ozone and Carbon Monoxide Nonattainment Areas," Memorandum from G.T. Helms,

Chief, Ozone/Carbon Monoxide Programs Branch, April 30, 1992;

3. "Contingency Measures for Ozone and Carbon Monoxide (CO) Redesignations," Memorandum from G.T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, June 1, 1992;

4. "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (the "Calcagni Memorandum");

5. "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;

6. "Technical Support Documents (TSDs) for Redesignation of Ozone and Carbon Monoxide (CO) Nonattainment Areas," Memorandum from G.T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, August 17, 1993;

7. "State Implementation Plan (SIP) Requirements for Areas Submitting Requests for 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 H. Shapiro, Acting Assistant Administrator for Air and Radiation, September 17, 1993;

8. "Use of Actual Emissions in Maintenance Demonstrations for Ozone and CO Nonattainment Areas," Memorandum from D. Kent Berry, Acting Director, Air Quality Management Division, November 30, 1993;
9. "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; and
10. "Reasonable Further Progress, Attainment Demonstration, and Related Requirements for Ozone Nonattainment Areas Meeting the Ozone National Ambient Air Quality Standard," Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, May 10, 1995.

IV. What is EPA's analysis of Indiana's redesignation request?

A. Has the Cincinnati area attained the 2008 ozone NAAQS?

For redesignation of 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)). An area is attaining the 2008 ozone NAAQS if it meets the 2008 ozone NAAQS, as determined in accordance with 40 CFR 50.15 and appendix P of part 50, based on three complete, consecutive calendar years of quality-assured air quality data for all monitoring sites in the area. To attain the NAAQS, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations

(ozone design values) at each monitor must not exceed 0.075 ppm. The air quality data must be collected and quality-assured in accordance with 40 CFR part 58 and recorded in EPA's Air Quality System (AQS). Ambient air quality monitoring data for the three-year period must also meet data completeness requirements. An ozone design value is valid if daily maximum 8-hour average concentrations are available for at least 90% of the days within the ozone monitoring seasons[2], on average, for the three-year period, with a minimum data completeness of 75% during the ozone monitoring season of any year during the three-year period. *See* section 2.3 of appendix P to 40 CFR part 50.

On May 4, 2016, in accordance with section 181(b)(2)(A) of the CAA and the provisions of the SIP Requirements Rule (40 CFR 51.1103), EPA made a determination that the Cincinnati area attained the standard by its July 20, 2015, attainment date for the 2008 ozone NAAQS. This determination was based upon three years of complete, quality-assured and certified data for the 2012-2014 period. In addition, EPA has reviewed the available ozone monitoring data from monitoring sites in the Cincinnati area for the 2013-2015 period. These data have been

[2] The ozone season is defined by state in 40 CFR 58 appendix D. For the 2012-2014 and 2013-2015 periods, the ozone seasons for Ohio, Indiana, and Kentucky were April-October, April-September, and March-October, respectively. Beginning in 2016, the ozone seasons for Ohio, Indiana and Kentucky are March-October. See, 80 FR 65292, 65466-67 (October 26, 2015).

quality-assured, are recorded in the AQS, and have been certified. These data demonstrate that the Cincinnati area is attaining the 2008 ozone NAAQS. The annual fourth-highest 8-hour ozone concentrations and the three-year average of these concentrations (monitoring site ozone design values) for each monitoring site are summarized in Table 1.

Table 1. Annual 4th high daily maximum 8-hour ozone concentrations and three-year average of the 4th high daily maximum 8-hour ozone concentrations for the Cincinnati area.

State	County	Monitor	2013 4th high (ppm)	2014 4th high (ppm)	2015 4th high (ppm)	2013-2015 average (ppm)
Ohio	Butler	39-017-0004	0.068	0.070	0.070	0.069
		39-017-0018	0.068	0.069	0.070	0.069
		39-017-9991	0.069	0.069	0.068	0.068
	Clermont	39-025-0022	0.066	0.068	0.070	0.068
	Clinton	39-027-1002	0.064	0.070	0.070	0.068
	Hamilton	39-061-0006	0.069	0.070	0.072	0.070
		39-061-0010	0.064	0.073	0.070	0.069
		39-061-0040	0.069	0.069	0.071	0.069
	Warren	39-165-0007	0.067	0.071	0.071	0.069
Kentucky	Boone	21-015-0003	0.059	0.062	0.062	0.061
	Campbell	21-037-3002	0.072	0.071	0.071	0.071

The three-year ozone design value for 2013-2015 is 0.071 ppm,[3] which meets the 2008 ozone NAAQS. Therefore, in this action, EPA proposes to determine that the Cincinnati area is attaining the 2008 ozone NAAQS.

EPA will not take final action to determine that the Cincinnati area is attaining the NAAQS nor to approve the

[3] The monitor ozone design value for the monitor with the highest three-year averaged concentration.

redesignation of this area if the design value of a monitoring site in the area exceeds the NAAQS after proposal but prior to final approval of the redesignation. Preliminary 2016 data indicate that this area continues to attain the 2008 ozone NAAQS. As discussed in section IV.D.3. of this preamble, IDEM has committed to continue monitoring ozone in this area to verify maintenance of the ozone standard.

B. Has Indiana met all applicable requirements of section 110 and part D of the CAA for the Cincinnati area, and does the Indiana portion of the area have a fully approved SIP under section 110(k) of the CAA?

As criteria for redesignation of an area from nonattainment to attainment of a NAAQS, 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 (*see* section 107(d)(3)(E)(v) of the CAA) and that the state has a fully approved SIP under section 110(k) of the CAA (*see* section 107(d)(3)(E)(ii) of the CAA). We are proposing to determine that Indiana has met all currently applicable SIP requirements for purposes of redesignation of the Cincinnati area to attainment of the 2008 ozone standard under section 110 and part D of the CAA, in accordance with section 107(d)(3)(E)(v). We are also proposing to determine that the Indiana SIP, with the exception of the comprehensive emissions inventory and emissions statements

rules, is fully approved with respect to all applicable requirements for purposes of redesignation to attainment of the 2008 ozone standard, in accordance with section 107(d)(3)(E)(ii) of the CAA. As discussed below, in this action EPA is proposing to approve Indiana's 2011 comprehensive emissions inventory as meeting the comprehensive emissions inventory requirement of section 182(a)(1) for the area. EPA is taking action on the Indiana emissions statements rules required by section 182(a)(3)(B) in a separate rule.

Recognizing that the comprehensive emissions inventory and emissions statements rules must be approved on or before the date we complete final rulemaking approving the redesignation requests, we determine here that, assuming that this occurs, Indiana will have met all applicable section 110 and part D SIP requirements of the CAA for purposes of approval of Indiana's ozone redesignation request for the Cincinnati area and will have a fully approved SIP under section 110(k) of the CAA. In making these proposed determinations, EPA ascertained which CAA requirements are applicable to the Cincinnati area and the Indiana SIP and, if applicable, whether the required Indiana SIP elements are fully approved under section 110(k) and part D of the CAA. As discussed more fully below, SIPs must be fully approved only with respect to currently applicable requirements of the CAA.

The September 4, 1992, Calcagni memorandum (see "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992) describes EPA's interpretation of section 107(d)(3)(E) of the CAA. Under this interpretation, a state and the area it wishes to redesignate must meet the relevant CAA requirements that are due prior to the state's submittal of a complete redesignation request for the area. *See also* the September 17, 1993, Michael Shapiro memorandum and 60 FR 12459, 12465-66 (March 7, 1995) (redesignation of Detroit-Ann Arbor, Michigan to attainment of the 1-hour ozone NAAQS). Applicable requirements of the CAA that come due subsequent to the state's submittal of a complete request remain applicable until a redesignation to attainment is approved, but are not required as a prerequisite to redesignation. *See* section 175A(c) of the CAA. *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004). *See also* 68 FR 25424, 25427 (May 12, 2003) (redesignation of the St. Louis/East St. Louis area to attainment of the 1-hour ozone NAAQS).

1. Indiana has met all applicable requirements of section 110 and part D of the CAA applicable to the Indiana portion of the Cincinnati area for purposes of redesignation.

a. Section 110 General Requirements for Implementation Plans.

Section 110(a)(2) of the CAA delineates the general requirements for a SIP. Section 110(a)(2) provides that the SIP must have been adopted by the state after reasonable public notice and hearing, and that, among other things, it must: (1) include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA; (2) provide for establishment and operation of appropriate devices, methods, systems and procedures necessary to monitor ambient air quality; (3) provide for implementation of a source permit program to regulate the modification and construction of stationary sources within the areas covered by the plan; (4) include provisions for the implementation of part C prevention of significant deterioration (PSD) and part D new source review (NSR) permit programs; (5) include provisions for stationary source emission control measures, monitoring, and reporting; (6) include provisions for air quality modeling; and, (7) provide for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) of the CAA requires SIPs to contain 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 transport of certain air

pollutants, e.g., NO_X SIP call.[4] However, like many of the 110(a)(2) requirements, the section 110(a)(2)(D) SIP requirements are not linked with a particular area's ozone designation and classification. EPA concludes that the SIP requirements linked with the area's ozone designation and classification are the relevant measures to evaluate when reviewing a redesignation request for the area. The section 110(a)(2)(D) requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area within the state. Thus, we believe these requirements are not applicable requirements for purposes of redesignation. *See* 65 FR 37890 (June 19, 2000), 68 FR 25418, 25426-27 (May 12, 2003).

In addition, EPA believes that other section 110 elements that are neither connected with nonattainment plan submissions nor linked with an area's ozone attainment status are not applicable requirements for purposes of redesignation. The area will still be subject to these requirements after the area is

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[4] On October 27, 1992 (63 FR 57356), EPA issued a NO_X SIP call requiring the District of Columbia and 22 states to reduce emissions of NO_X in order to reduce the transport of ozone and ozone precursors. In compliance with EPA's NO_X SIP call, Indiana developed rules governing the control of NO_X emissions from Electric Generating Units (EGUs), major non-EGU industrial boilers and turbines, and major cement kilns. EPA approved Indiana's rules as fulfilling Phase I of the NO_X SIP Call on November 8, 2001 (66 FR 56465), and as meeting Phase II of the NO_X SIP Call on October 1, 2007 (72 FR 55664).

redesignated to attainment of the 2008 ozone NAAQS. 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) and 62 FR 24826 (May 7, 1997); Cleveland-Akron-Loraine, Ohio final rulemaking, 61 FR 20458 (May 7, 1996); and Tampa, Florida final rulemaking, 60 FR 62748 (December 7, 1995). *See also* the discussion of this issue in the Cincinnati, Ohio ozone redesignation (65 FR 37890, June 19, 2000), and the Pittsburgh, Pennsylvania ozone redesignation (66 FR 50399, October 19, 2001).

We have reviewed Indiana's SIP and have concluded that it meets the general SIP requirements under section 110 of the CAA, to the extent those requirements are applicable for purposes of redesignation. On April 29, 2015 (80 FR 23713), EPA approved elements of the SIP submitted by Indiana to meet the requirements of section 110 for the 2008 ozone standard. The requirements of section 110(a)(2), however, are statewide requirements that are not linked to the ozone nonattainment

status of the Cincinnati area. Therefore, EPA concludes that these infrastructure requirements are not applicable requirements for purposes of review of the state's ozone redesignation request.

b. Part D Requirements.

Section 172(c) of the CAA sets forth the basic requirements of air quality plans for states with nonattainment areas that are required to submit them pursuant to section 172(b). Subpart 2 of part D, which includes section 182 of the CAA, establishes specific requirements for ozone nonattainment areas depending on the areas' nonattainment classifications.

The Cincinnati area was classified as marginal under subpart 2 for the 2008 ozone NAAQS. As such, the area is subject to the subpart 1 requirements contained in section 172(c) and section 176. Similarly, the area is subject to the subpart 2 requirements contained in section 182(a) (marginal nonattainment area requirements). A thorough discussion of the requirements contained in section 172(c) and 182 can be found in the General Preamble for Implementation of Title I (57 FR 13498).

i. Subpart 1 Section 172 Requirements.

As provided in subpart 2, for marginal ozone nonattainment areas such as the Cincinnati area, the specific requirements of section 182(a) apply in lieu of the attainment planning

requirements that would otherwise apply under section 172(c), including the attainment demonstration and reasonably available control measures (RACM) under section 172(c)(1), reasonable further progress (RFP) under section 172(c)(2), and contingency measures under section 172(c)(9). 42 U.S.C. 7511a(a).

Section 172(c)(3) requires submission and approval of a comprehensive, accurate and current inventory of actual emissions. This requirement is superseded by the inventory requirement in section 182(a)(1) discussed below.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources 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 approved Indiana's NSR program on October 7, 1994 (59 FR 51108), and approved revisions to Indiana's NSR program on June 18, 2007 (72 FR 33395), July 8, 2011 (76 FR 40242), and July 2, 2014 (79 FR 37646). Nonetheless, 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." Indiana has demonstrated that the Cincinnati area will be able to maintain the standard without part D NSR in effect; therefore, EPA concludes that the state need not have a fully approved part D NSR program prior to approval of the redesignation request. *See* 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). Indiana's PSD program will become effective in the Cincinnati area upon redesignation to attainment. EPA conditionally approved Indiana's PSD program on March 3, 2003 (68 FR 9892), fully approved Indiana's PSD program on May 20, 2004 (69 FR 29071), and approved revisions to Indiana's PSD program on July 8, 2011 (76 FR 40242), September 28, 2011 (76 FR 59899), and July 2, 2014 (79 FR 37646).

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)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, we believe the

Indiana SIP meets the requirements of section 110(a)(2) for purposes of redesignation.

ii. Section 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 interprets the conformity SIP requirements[5] as not applying for purposes of evaluating a redesignation request under section 107(d) because state conformity rules are still required after redesignation and Federal conformity rules apply

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[5] 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 SIPs requiring the development of Motor Vehicle Emission Budgets (MVEBs), such as control strategy SIPs and maintenance plans.

where state conformity rules have not been approved. *See Wall v. EPA,* 265 F.3d 426 (6th Cir. 2001) (upholding this interpretation); *see also* 60 FR 62748 (December 7, 1995) (redesignation of Tampa, Florida). Nonetheless, Indiana has an approved conformity SIP for the Cincinnati area. *See* 80 FR 11133 (March 2, 2015).

iii. Section 182(a) Requirements.

Section 182(a)(1) requires states to submit a comprehensive, accurate, and current inventory of actual emissions from sources of VOC and NO_X emitted within the boundaries of the ozone nonattainment area. As part of Indiana's redesignation request for the Cincinnati area, the state submitted a 2011 base year emissions inventory. As discussed in section VI. of this preamble, EPA is proposing to approve the 2011 base year inventory that Indiana submitted with the redesignation request as meeting the section 182(a)(1) emissions inventory requirement.

Under section 182(a)(2)(A), states with ozone nonattainment areas that were designated prior to the enactment of the 1990 CAA amendments were required to submit, within six months of classification, all rules and corrections to existing VOC reasonably available control technology (RACT) rules that were required under section 172(b)(3) prior to the 1990 CAA amendments. The Indiana portion of the Cincinnati area is not

subject to the section 182(a)(2) RACT "fix up" requirement for the 2008 ozone NAAQS because it was not subject to RACT prior to the enactment of the 1990 CAA amendments.

Section 182(a)(2)(B) requires each state with a marginal ozone nonattainment area that implemented or was required to implement a vehicle inspection and maintenance (I/M) program prior to the 1990 CAA amendments to submit a SIP revision for an I/M program no less stringent than that required prior to the 1990 CAA amendments or already in the SIP at the time of the CAA amendments, whichever is more stringent. For the purposes of the 2008 ozone standard and the consideration of Indiana's redesignation request for this standard, the Indiana portion of the Cincinnati area is not subject to the section 182(a)(2)(B) requirement because it was not designated as nonattainment for any ozone standard prior to the enactment of the 1990 CAA amendments and did not have an I/M program before 1990.

Regarding the source permitting and offset requirements of section 182(a)(2)(C) and section 182(a)(4), Indiana currently has a fully-approved part D NSR program in place. EPA conditionally approved Indiana's PSD program on March 3, 2003 (68 FR 9892), fully approved Indiana's PSD program on May 20, 2004 (69 FR 29071), and approved revisions to Indiana's PSD program on July 8, 2011 (76 FR 40242), September 28, 2011 (76 FR 59899), and July 2, 2014 (79 FR 37646). As discussed above,

Indiana has demonstrated that the Cincinnati area will be able to maintain the standard without part D NSR in effect; therefore, EPA concludes that the state need not have a fully approved part D NSR program prior to approval of the redesignation request. The state's PSD program will become effective in the Cincinnati area upon redesignation to attainment.

Section 182(a)(3)(A) requires states to submit periodic emission inventories and section 182(a)(3)(B) requires states to submit a revision to the SIP to require the owners or operators of stationary sources to annually submit emissions statements documenting actual VOC and NO_X emissions. As discussed in section IV.D.4. of this preamble, Indiana will continue to update its emissions inventory at least once every three years. With regard to stationary source emissions statements, Indiana submitted a SIP revision to address these requirements on June 1, 2016. EPA is taking action on this revision in a separate rulemaking action. Full approval of Indiana's emissions statements rules is a prerequisite for approval of the redesignation of the Cincinnati area to attainment.

Upon approval of Indiana's emissions inventory and emissions statements rules, the Indiana portion of the Cincinnati area will have satisfied all applicable requirements

for purposes of redesignation under section 110 and part D of title I of the CAA.

2. The Indiana portion of the Cincinnati area has a fully approved SIP for purposes of redesignation under section 110(k) of the CAA.

Indiana has adopted and submitted and EPA has approved at various times, provisions addressing the various SIP elements applicable for the ozone NAAQS. In this action, EPA is proposing to approve Indiana's 2011 comprehensive emissions inventory for the Cincinnati area as meeting the requirement of section 182(a)(1) of the CAA. In a separate rule, EPA will take action on the Indiana emissions statements rules submittal. As discussed above, if EPA issues a final approval of the comprehensive emissions inventory and Indiana's emissions statements rules submittals, EPA will have fully approved the Indiana SIP for the Cincinnati 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* the Calcagni memorandum at page 3; *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-990 (6th Cir. 1998); *Wall v. EPA*, 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).

C. Are the air quality improvements in the Cincinnati area due to permanent and enforceable emission reductions?

To support the redesignation of an area from nonattainment to attainment, section 107(d)(3)(E)(iii) of 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 the implementation of the SIP and applicable Federal air pollution control regulations and other permanent and other permanent and enforceable emission reductions. EPA has determined that Indiana has demonstrated that that the observed ozone air quality improvement in the Cincinnati area is due to permanent and enforceable reductions in VOC and NO_X emissions resulting from state measures adopted into the SIP and Federal measures.

In making this demonstration, the state has calculated the change in emissions between 2011 and 2014. The reduction in emissions and the corresponding improvement in air quality over this period can be attributed to a number of regulatory control measures that the Cincinnati area and upwind areas have implemented in recent years. In addition, IDEM provided an analysis to demonstrate the improvement in air quality was not due to unusually favorable meteorology. Based on the information summarized below, Indiana has adequately

demonstrated that the improvement in air quality is due to permanent and enforceable emissions reductions.

1. Permanent and enforceable emission controls implemented.

a. Regional NO_X Controls.

Clean Air Interstate Rule (CAIR)/Cross State Air Pollution Rule (CSAPR). CAIR created regional cap-and-trade programs to reduce sulfur dioxide (SO_2) and NO_X emissions in 27 eastern states, including Indiana, that contributed to downwind nonattainment and maintenance of the 1997 ozone NAAQS and the 1997 fine particulate matter ($PM_{2.5}$) NAAQS. *See* 70 FR 25162 (May 12, 2005). EPA approved Indiana's CAIR regulations into the Indiana SIP on October 22, 2007 (72 FR 59480) and November 29, 2010 (75 FR 72956). In 2008, the United States Court of Appeals for the District of Columbia Circuit (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 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 SO_2 and NO_X

emissions from electric generating units (EGUs) in 28 states in the Eastern United States.

The D.C. Circuit's initial vacatur of CSAPR[6] 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 CSAPR budgets as to a number of states. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118 (D.C. Cir. 2015). This litigation ultimately delayed implementation of CSAPR 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. Thus, the rule's Phase 2 budgets were originally promulgated to begin on January 1, 2014, and are now scheduled to begin on January 1, 2017. On October 26, 2016 (81 FR 74504), EPA published the CSAPR Update for the 2008 ozone NAAQS, which resolves the invalidation of Phase 2 budgets by the D.C. Circuit. That action promulgates new NO_X ozone season budgets addressing interstate transport with respect to the 2008 ozone NAAQS that take effect in 2017. The reduction in NO_X emissions from the implementation of CSAPR will

[6] *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 38 (D.C. Cir. 2012).

result in lower concentrations of transported ozone entering the Cincinnati area throughout the maintenance period.

b. Federal Emission Control Measures.

Reductions in VOC and NO_X emissions have occurred statewide and in upwind areas as a result of Federal emission control measures, with additional emission reductions expected to occur in the future. Federal emission control measures include the following.

Tier 2 Emission Standards for Vehicles and Gasoline Sulfur Standards. On February 10, 2000(65 FR 6698), EPA promulgated Tier 2 motor vehicle emission standards and gasoline sulfur control requirements. These emission control requirements result in lower VOC and NO_X emissions from new cars and light duty trucks, including sport utility vehicles. With respect to fuels, this rule required refiners and importers of gasoline to meet lower standards for sulfur in gasoline, which were phased in between 2004 and 2006. By 2006, refiners were required to meet a 30 ppm average sulfur level, with a maximum cap of 80 ppm. This reduction in fuel sulfur content ensures the effectiveness of low emission-control technologies. The Tier 2 tailpipe standards established in this rule were phased in for new vehicles between 2004 and 2009. EPA estimates that, when fully implemented, this rule will cut NO_X and VOC emissions from light-duty vehicles and light-duty trucks by approximately 76%

and 28%, respectively. NO_X and VOC reductions from medium-duty passenger vehicles included as part of the Tier 2 vehicle program are estimated to be approximately 37,000 and 9,500 tons per year, respectively, when fully implemented. In addition, EPA estimates that beginning in 2007, a reduction of 30,000 tons per year of NO_X will result from the benefits of sulfur control on heavy-duty gasoline vehicles. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period, as older vehicles are replaced with newer, compliant model years.

Tier 3 Emission Standards for Vehicles and Gasoline Sulfur Standards. On April 28, 2014 (79 FR 23414), EPA promulgated Tier 3 motor vehicle emission and fuel standards to reduce both tailpipe and evaporative emissions and to further reduce the sulfur content in fuels. The rule will be phased in between 2017 and 2025. Tier 3 sets new tailpipe standards for the sum of VOC and NO_X and for particulate matter. The VOC and NO_X tailpipe standards for light-duty vehicles represent approximately an 80% reduction from today's fleet average and a 70% reduction in per-vehicle particulate matter (PM) standards. Heavy-duty tailpipe standards represent about a 60% reduction in both fleet average VOC and NO_X and per-vehicle PM standards. The evaporative emissions requirements in the rule will result in

approximately a 50% reduction from current standards and apply to all light-duty and onroad gasoline-powered heavy-duty vehicles. Finally, the rule lowers the sulfur content of gasoline to an annual average of 10 ppm by January 2017. While these reductions did not aid the area in attaining the standard, emission reductions will occur during the maintenance period.

Heavy-Duty Diesel Engine Rules. In July 2000, EPA issued a rule for on-highway heavy-duty diesel engines that includes standards limiting the sulfur content of diesel fuel. Emissions standards for NO_X, VOC and PM were phased in between model years 2007 and 2010. In addition, the rule reduced the highway diesel fuel sulfur content to 15 parts per million by 2007, leading to additional reductions in combustion NO_X and VOC emissions. EPA has estimated future year emission reductions due to implementation of this rulemaking. Nationally, EPA estimated that 2015 NO_X and VOC emissions would decrease by 1,260,000 tons and 54,000 tons, respectively. Nationally, EPA estimated that 2030 NO_X and VOC emissions will decrease by 2,570,000 tons and 115,000 tons, respectively. As projected by these estimates and demonstrated in the onroad emission modeling for the Cincinnati area, some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period, as older vehicles are replaced with newer, compliant model years.

Nonroad Diesel Rule. On June 29, 2004 (69 FR 38958), EPA issued a rule adopting emissions standards for nonroad diesel engines and sulfur reductions in nonroad diesel fuel. This rule applies to diesel engines used primarily in construction, agricultural, and industrial applications. Emission standards are phased in for 2008 through 2015 model years based on engine size. The SO_2 limits for nonroad diesel fuels were phased in from 2007 through 2012. EPA estimates that when fully implemented, compliance with this rule will cut NO_X emissions from these nonroad diesel engines by approximately 90%. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period.

Nonroad Spark-Ignition Engines and Recreational Engine Standards. On November 8, 2002 (67 FR 68242), EPA adopted emission standards for large spark-ignition engines such as those used in forklifts and airport ground-service equipment; recreational vehicles such as off-highway motorcycles, all-terrain vehicles, and snowmobiles; and recreational marine diesel engines. These emission standards are phased in from model year 2004 through 2012. When fully implemented, EPA estimates an overall 72% reduction in VOC emissions from these engines and an 80% reduction in NO_X emissions. Some of these emission reductions occurred by the attainment years and

additional emission reductions will occur throughout the maintenance period.

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines. On March 3, 2010 (75 FR 9648), EPA issued a rule to reduce hazardous air pollutants from existing diesel powered stationary reciprocating internal combustion engines, also known as compression ignition engines. Amendments to this rule were finalized on January 14, 2013 (78 FR 6674). EPA estimated that when this rule is fully implemented in 2013, NO_X and VOC emissions from these engines will be reduced by approximately 9,600 and 36,000 tons per year, respectively.

Category 3 Marine Diesel Engine Standards. On April 30, 2010 (75 FR 22896) EPA issued emission standards for marine compression-ignition engines at or above 30 liters per cylinder. Tier 2 emission standards apply beginning in 2011, and are expected to result in a 15% to 25% reduction in NO_X emissions from these engines. Final Tier 3 emission standards apply beginning in 2016 and are expected to result in approximately an 80% reduction in NO_X from these engines. Some of these emission reductions occurred by the attainment years and additional emission reductions will occur throughout the maintenance period.

c. Control Measures Specific to the Cincinnati Area.

Changes at several EGUs have resulted in reductions in NO_X emissions. Tanner's Creek Generating Station in Dearborn County, Indiana permanently shut down in May 2015. Prior to the shutdown, NO_X emissions had dropped from 15.08 tons per summer day (TPSD) in 2011 to 10.6 TPSD in 2014. The Walter C. Beckjord facility in Clermont County, Ohio permanently shut down in October of 2014. Prior to the shutdown, NO_X emissions from EGUs in Clermont County dropped from 43.41 TPSD in 2011 to 41.17 TPSD in 2014, partly attributable to the Walter C. Beckjord facility. Finally, Unit 3 (163 megawatts) of the Miami Fort facility in Hamilton County, Ohio permanently shut down in June of 2015. Prior to shutdown, NO_X emissions from EGUs in Hamilton County dropped from 17.72 TPSD in 2011 to 17.46 TPSD in 2014, partly attributable to reductions at unit 3 at Miami Fort.

2. Emission reductions.

Indiana is using a 2011 inventory as the nonattainment base year. Area, nonroad mobile, airport related emissions (AIR), and point source emissions (EGUs and non-EGUs) were collected from the Ozone NAAQS Implementation Modeling platform (2011v6.1). For 2011, this represents actual data reported to EPA by the states for the 2011 National Emissions inventory (NEI). Because emissions from state inventory databases, the NEI, and the Ozone NAAQS Emissions Modeling platform are annual totals, tons per summer day were derived according to EPA's

guidance document "Temporal Allocation of Annual Emissions Using EMCH Temporal Profiles" dated April 29 2002, using the temporal allocation references accompanying the 2011v6.1 modeling inventory files. Onroad mobile source emissions were developed in conjunction with the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and were calculated from emission factors produced by EPA's 2014 Motor Vehicle Emission Simulator (MOVES) model and data extracted from the region's travel-demand model.

For the attainment inventory, Indiana is using 2014, one of the years the Cincinnati area monitored attainment of the 2008 ozone standard. Because the 2014 NEI inventory was not available at the time IDEM was compiling the redesignation request, the state was unable to use the 2014 NEI inventory directly. For area, nonroad mobile, and AIR, 2014 emissions were derived by interpolating between 2011 and 2018 Ozone NAAQS Emissions Modeling platform inventories. The point source sector for the 2014 inventory was developed using actual 2014 point source emissions reported to the state databases, which serve as the basis for the point source emissions reported to EPA for the NEI. Summer day inventories were derived for these sectors using the methodology described above. Finally, onroad mobile source emissions were developed in conjunction with OKI using the same methodology described above for the 2011 inventory.

Using the inventories described above, Indiana's submittal documents changes in VOC and NO_X emissions from 2011 to 2014 for the Cincinnati area. Emissions data are shown in Tables 2 through 7.

Table 2. Cincinnati area NO_X emissions for nonattainment year 2011(TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	17.79	0.00	0.53	0.47	1.89	20.68
Ohio						
Butler	10.67	0.02	4.27	4.78	12.24	31.98
Clermont	43.55	0.00	2.27	1.14	7.52	54.48
Clinton	0.00	0.00	1.15	0.52	4.53	6.20
Hamilton	26.29	0.02	8.56	10.09	33.69	78.65
Warren	1.55	0.00	3.24	1.66	9.84	16.29
Kentucky						
Boone	7.19	2.03	1.06	0.43	6.90	17.61
Campbell	0.17	0.00	0.38	0.49	4.30	5.34
Kenton	0.01	0.00	0.77	1.02	6.53	8.33
Area Totals	107.22	2.07	22.23	20.60	87.44	239.56

Table 3. Cincinnati area VOC emissions for nonattainment year 2011 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	4.28	0.00	0.42	1.75	1.33	7.78
Ohio						
Butler	3.09	0.03	2.93	9.59	10.21	25.85
Clermont	0.49	0.01	1.95	5.41	6.27	14.13
Clinton	0.00	0.01	0.84	2.49	2.27	5.61
Hamilton	2.62	0.04	7.44	21.88	28.09	60.07
Warren	0.62	0.01	2.12	5.71	8.21	16.67

Kentucky						
Boone	1.73	0.42	1.49	2.66	3.30	9.60
Campbell	0.22	0.00	0.40	1.29	2.05	3.96
Kenton	0.51	0.00	0.62	2.51	3.12	6.76
Area Totals	13.56	0.52	18.21	53.29	64.85	150.43

Table 4. Cincinnati area NO_X emissions for attainment year 2014 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	11.74	0.00	0.44	0.47	1.37	14.02
Ohio						
Butler	12.70	0.02	3.39	4.78	8.85	29.74
Clermont	41.20	0.00	1.81	1.14	5.44	49.59
Clinton	0.00	0.00	0.96	0.52	3.51	4.99
Hamilton	21.65	0.02	6.76	10.08	24.37	62.88
Warren	0.96	0.00	2.55	1.66	7.12	12.29
Kentucky						
Boone	7.37	2.07	0.88	0.43	5.46	16.21
Campbell	0.17	0.00	0.32	0.49	3.41	4.39
Kenton	0.01	0.00	0.64	1.02	5.17	6.84
Area Totals	95.80	2.11	17.75	20.59	64.70	200.95

Table 5. Cincinnati area VOC emissions for attainment year 2014 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	5.54	0.00	0.36	1.75	0.99	8.64
Ohio						
Butler	2.96	0.03	2.61	9.51	7.59	22.70
Clermont	0.63	0.01	1.73	5.36	4.66	12.39
Clinton	0.01	0.01	0.71	2.51	1.53	4.77
Hamilton	2.73	0.04	6.54	21.66	20.88	51.85
Warren	0.51	0.01	1.93	5.66	6.10	14.21

Kentucky						
Boone	1.73	0.42	1.30	2.56	2.53	8.54
Campbell	0.22	0.00	0.34	1.26	1.58	3.40
Kenton	0.51	0.00	0.55	2.43	2.39	5.88
Area Totals	14.84	0.52	16.07	52.70	48.25	132.38

Table 6. Change in NO_X and VOC emissions between 2011 and 2014 for the Indiana portion of the Cincinnati area (TPSD).

	NO_X			VOC		
	2011	2014	Net Change (2011-2014)	2011	2014	Net Change (2011-2014)
Point	17.79	11.74	-6.05	4.28	5.54	1.26
AIR	0.00	0.00	0.00	0.00	0.00	0.00
Nonroad	0.53	0.44	-0.09	0.42	0.36	-0.06
Area	0.47	0.47	0.00	1.75	1.75	0.00
Onroad	1.89	1.37	-0.52	1.33	0.99	-0.34
Total	20.68	14.02	-6.66	7.78	8.64	0.86

Table 7. Change in NO_X and VOC emissions between 2011 and 2014 for the entire Cincinnati area (TPSD).

	NO_X			VOC		
	2011	2014	Net Change (2011-2014)	2011	2014	Net Change (2011-2014)
Point	107.22	95.80	-11.42	13.56	14.84	1.28
AIR	2.07	2.11	0.04	0.52	0.52	0.00
Nonroad	22.23	17.75	-4.48	18.21	16.07	-2.14
Area	20.60	20.59	-0.01	53.29	52.70	-0.59
Onroad	87.44	64.70	-22.74	64.85	48.25	-16.60
Total	239.56	200.95	-38.61	150.43	132.38	-18.05

Table 7 shows that the Cincinnati area reduced NO_X and VOC emissions by 38.61 TPSD and 18.05 TPSD, respectively, between 2011 and 2014. As shown in Table 6, the Indiana portion of the Cincinnati area alone reduced NO_X emissions by 6.66 TPSD, but VOC

emissions increased slightly by 0.86 TPSD, between 2011 and 2014. However, overall there was a substantial decrease in both NO_X and VOC emissions for the entire Cincinnati area.

3. Meteorology.

To further support IDEM's demonstration that the improvement in air quality between the year violations occurred and the year attainment was achieved, is due to permanent and enforceable emission reductions and not on favorable meteorology, an analysis was performed by the Lake Michigan Air Directors Consortium (LADCO). A classification and regression tree (CART) analysis was conducted with 2000 through 2014 data from three Cincinnati area ozone sites. The goal of the analysis was to determine the meteorological and air quality conditions associated with ozone episodes, and construct trends for the days identified as sharing similar meteorological conditions.

Regression trees were developed for the three monitors to classify each summer day by its ozone concentration and associated meteorological conditions. By grouping days with similar meteorology, the influence of meteorological variability on the underlying trend in ozone concentrations is partially removed and the remaining trend is presumed to be due to trends in precursor emissions or other non-meteorological influences. The CART analysis showed that, reducing the impact of

meteorology, the resulting trends in ozone concentrations declined over the period examined, supporting the conclusion that the improvement in air quality was not due to unusually favorable meteorology.

D. Does Indiana have a fully approvable ozone maintenance plan for the Cincinnati area?

As one of the criteria for redesignation to attainment section 107(d)(3)(E)(iv) of the CAA requires EPA to determine that the area has a fully approved maintenance plan pursuant to section 175A of the CAA. 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 maintenance plan must demonstrate continued attainment of the NAAQS for at least 10 years after the Administrator approves a redsignation to attainment. Eight years after the redesignation, the state must submit a revised maintenance plan which demonstrates that attainment of the NAAQS will continue for an additional 10 years beyond the initial 10-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures, as EPA deems necessary, to assure prompt correction of the future NAAQS violation.

The Calcagni Memorandum provides further guidance on the content of a maintenance plan, explaining that a maintenance

plan should address five elements: (1) an attainment emission inventory; (2) a maintenance demonstration; (3) a commitment for continued air quality monitoring; (4) a process for verification of continued attainment; and (5) a contingency plan. In conjunction with its request to redesignate the Indiana portion of the Cincinnati area to attainment for the 2008 ozone standard, IDEM submitted a SIP revision to provide for maintenance of the 2008 ozone standard through 2030, more than 10 years after the expected effective date of the redesignation to attainment. As is discussed more fully below, EPA proposes to find that Indiana's ozone maintenance plan includes the necessary components and is proposing to approve the maintenance plan as a revision of the Indiana SIP.

1. Attainment inventory.

EPA is proposing to determine that the Cincinnati area has attained the 2008 ozone NAAQS based on monitoring data for the period of 2013-2015. IDEM selected 2014 as the attainment emissions inventory year to establish attainment emission levels for VOC and NO_X. The attainment emissions inventory identifies the levels of emissions in the Cincinnati area that are sufficient to attain the 2008 ozone NAAQS. The derivation of the attainment year emissions was discussed above in section IV.C.2. of this premble. The attainment level emissions, by source category, are summarized in Tables 4 and 5 above.

2. Has the state documented maintenance of the ozone standard in the Cincinnati area?

Indiana has demonstrated maintenance of the 2008 ozone standard through 2030 by assuring that current and future emissions of VOC and NO_X for the Cincinnati area remain at or below attainment year emission levels. A maintenance demonstration need not be based on modeling. *See Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001), *Sierra Club v. EPA*, 375 F. 3d 537 (7th Cir. 2004). *See also* 66 FR 53094, 53099-53100 (October 19, 2001), 68 FR 25413, 25430-25432 (May 12, 2003).

Indiana is using emissions inventories for the years 2020 and 2030 to demonstrate maintenance. 2030 is more than 10 years after the expected effective date of the redesignation to attainment and 2020 was selected to demonstrate that emissions are not expected to spike in the interim between the attainment year and the final maintenance year. The emissions inventories were developed as described below.

To develop the 2020 and 2030 inventories, the state collected data from the Ozone NAAQS Emissions Modeling platform (2011v6.1) inventories for years 2011, 2018 and 2025. 2020 emissions for area, nonroad mobile, AIR, and point source sectors were derived by interpolating between 2018 and 2025. 2030 emissions for area, nonroad mobile, AIR, and point source sectors were derived using the TREND function in Excel. If the

trend function resulted in a negative value the emissions were assumed not to change. Summer day inventories were derived for these sectors using the methodology described in section IV.C.2. above. Finally, onroad mobile source emissions were developed in conjunction with OKI using the same methodology described in section IV.C.2. above for the 2011 inventory. Emissions data are shown in Tables 8 through 13 below.

Table 8. Cincinnati area NO_X emissions for interim maintenance year 2020 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	2.96	0.00	0.30	0.48	0.74	4.48
Ohio						
Butler	9.77	0.02	2.03	4.78	4.74	21.34
Clermont	31.32	0.00	1.11	1.14	2.91	36.48
Clinton	0.00	0.00	0.64	0.52	1.86	3.02
Hamilton	18.73	0.02	4.06	10.08	13.05	45.94
Warren	1.54	0.00	1.50	1.66	3.81	8.51
Kentucky						
Boone	7.86	2.29	0.60	0.43	2.41	13.59
Campbell	0.17	0.00	0.23	0.49	1.50	2.39
Kenton	0.01	0.00	0.43	1.02	2.28	3.74
Area Totals	72.36	2.33	10.90	20.60	33.30	139.49

Table 9. Cincinnati area VOC emissions for interim maintenance year 2020 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	4.06	0.00	0.29	1.77	0.62	6.74
Ohio						

Butler	2.98	0.03	2.23	9.38	4.79	19.41
Clermont	0.51	0.01	1.43	5.28	2.94	10.17
Clinton	0.00	0.01	0.51	2.54	0.93	3.99
Hamilton	2.54	0.04	5.42	21.30	13.18	42.48
Warren	0.60	0.01	1.54	5.59	3.85	11.59
Kentucky						
Boone	1.73	0.45	1.03	2.41	1.38	7.00
Campbell	0.22	0.00	0.25	1.22	0.86	2.55
Kenton	0.49	0.00	0.47	2.31	1.30	4.57
Area Totals	13.13	0.55	13.17	51.80	29.85	108.50

Table 10. Cincinnati area NO_X emissions for maintenance year 2030 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	2.96	0.00	0.18	0.48	0.39	4.01
Ohio						
Butler	9.83	0.00	1.16	4.79	2.44	18.22
Clermont	31.32	0.00	0.63	1.15	1.50	34.60
Clinton	0.00	0.00	0.29	0.53	1.28	2.10
Hamilton	18.75	0.00	2.59	10.10	6.71	38.15
Warren	1.54	0.00	0.78	1.67	1.96	5.95
Kentucky						
Boone	8.51	0.29	0.38	0.44	1.05	10.67
Campbell	0.17	0.00	0.15	0.49	0.65	1.46
Kenton	0.01	0.00	0.27	1.02	0.99	2.29
Area Totals	73.09	0.29	6.43	20.67	16.97	117.45

Table 11. Cincinnati area VOC emissions for maintenance year 2030 (TPSD).

County	Point	AIR	Nonroad	Area	Onroad	Total
Indiana						
Dearborn	4.06	0.00	0.27	1.85	0.38	6.56
Ohio						

Butler	3.00	0.01	2.43	9.31	2.88	17.63
Clermont	0.64	0.00	1.46	5.20	1.77	9.07
Clinton	0.01	0.00	0.42	2.61	0.71	3.75
Hamilton	2.62	0.00	5.87	21.01	7.92	37.42
Warren	0.58	0.00	1.51	5.52	2.32	9.93
Kentucky						
Boone	1.73	0.06	0.92	2.36	0.77	5.84
Campbell	0.21	0.00	0.22	1.19	0.48	2.10
Kenton	0.47	0.00	0.50	2.25	0.73	3.95
Area Totals	13.32	0.07	13.60	51.30	17.96	96.25

Table 12. Change in NO_X and VOC emissions between 2014 and 2030 for the Indiana portion of the Cincinnati area (TPSD).

	NO_X				VOC			
	2014	2020	2030	Net Change (2014-2030)	2014	2020	2030	Net Change (2014-2030)
Point	11.74	2.96	2.96	-8.78	5.54	4.06	4.06	-1.48
AIR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nonroad	0.44	0.30	0.18	-0.26	0.36	0.29	0.27	-0.09
Area	0.47	0.48	0.48	0.01	1.75	1.77	1.85	0.10
Onroad	1.37	0.74	0.39	-0.98	0.99	0.62	0.38	-0.61
Total	14.02	4.48	4.01	-10.01	8.64	6.74	6.56	-2.08

Table 13. Change in NO_X and VOC emissions between 2014 and 2030 for the entire Cincinnati area (TPSD).

	NO_X				VOC			
	2014	2020	2030	Net Change (2014-2030)	2014	2020	2030	Net Change (2014-2030)
Point	95.80	72.36	73.09	-22.71	14.84	13.13	13.32	-1.52
AIR	2.11	2.33	0.29	-1.82	0.52	0.55	0.07	-0.45
Nonroad	17.75	10.90	6.43	-11.32	16.07	13.17	13.60	-2.47
Area	20.59	20.60	20.67	0.08	52.70	51.80	51.30	-1.40
Onroad	64.70	33.30	16.97	-47.73	48.25	29.85	17.96	-30.29
Total	200.95	139.49	117.45	-83.50	132.38	108.50	96.25	-36.13

In summary, the maintenance demonstration for the Cincinnati area shows maintenance of the 2008 ozone standard by providing emissions information to support the demonstration that future emissions of NO_X and VOC will remain at or below 2014 emission levels when taking into account both future source growth and implementation of future controls. Table 13 shows NO_X and VOC emissions in the Cincinnati area are projected to decrease by 83.50 TPSD and 36.13 TPSD, respectively, between 2014 and 2030. As shown in Table 12, NO_X and VOC emissions in the Indiana portion of the Cincinnati area alone are projected to decrease by 10.01 TPSD and 2.08 TPSD, respectively, between 2014 and 2030.

3. Continued air quality monitoring.

IDEM has committed to continue to operate the ozone monitors listed in Table 1 above. IDEM has committed to consult with EPA prior to making changes to the existing monitoring network should changes become necessary in the future. Indiana remains obligated to meet monitoring requirements and continue to quality assure monitoring data in accordance with 40 CFR part 58, and to enter all data into the Air Quality System (AQS) in accordance with Federal guidelines.

4. Verification of continued attainment.

The State of Indiana has the legal authority to enforce and implement the requirements of the maintenance plan for the

Indiana portion of the Cincinnati area. This includes the authority to adopt, implement, and enforce any subsequent emission control measures determined to be necessary to correct future ozone attainment problems.

Verification of continued attainment is accomplished through operation of the ambient ozone monitoring network and the periodic update of the area's emissions inventory. IDEM will continue to operate the current ozone monitors located in the Indiana portion of the Cincinnati area. There are no plans to discontinue operation, relocate, or otherwise change the existing ozone monitoring network other than through revisions in the network approved by the EPA.

In addition, to track future levels of emissions, IDEM will continue to develop and submit to EPA updated emission inventories for all source categories at least once every three years, consistent with the requirements of 40 CFR part 51, subpart A, and in 40 CFR 51.122. The Consolidated Emissions Reporting Rule (CERR) was promulgated by EPA on June 10, 2002 (67 FR 39602). The CERR was replaced by the Annual Emissions Reporting Requirements (AERR) on December 17, 2008 (73 FR 76539). The most recent triennial inventory for Indiana was compiled for 2014. Point source facilities covered by Indiana's emissions statements rule, which was submitted separately by IDEM for inclusion in Indiana's SIP and is being considered by

EPA in a separate rule, will submit VOC and NO_X emissions on an annual basis.

5. What is the contingency plan for the Cincinnati area?

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

As required by section 175A of the CAA, Indiana has adopted a contingency plan for the Cincinnati area to address possible future ozone air quality problems. The contingency plan adopted by Indiana has two levels of response, a warning level response and an action level response.

In Indiana's plan, a warning level response will be triggered when an annual fourth high monitored value of 0.079 ppm or higher is monitored within the maintenance area. A warning level response will consist of IDEM conducting a study to determine whether the ozone value indicates a trend toward higher ozone values and/or whether emissions appear to be increasing. The studies will evaluate whether the trend, if any, is likely to continue and, if so, the control measures necessary to reverse the trend. The studies will consider ease and timing of implementation as well as economic and social impacts. Implementation of necessary controls in response to a warning level response trigger will take place within 12 months from the conclusion of the most recent ozone season.

In Indiana's plan, an action level response is triggered when a two-year average fourth high value of 0.076 ppm or greater is monitored within the maintenance area. A violation of the standard within the maintenance area also triggers an action level response. When an action level response is triggered, IDEM will determine what additional control measures are needed to assure future attainment of the ozone standard, and will adopt these measures through the necessary administrative and legal process, including the opportunity for a public hearing. Control measures selected will be adopted and implemented within 18 months from the close of the ozone season

that prompted the action level. IDEM may also consider if a new measure or control is already promulgated and scheduled to be implemented at the federal or state level and would thus constitute an adequate contingency measure response.

IDEM included the following list of potential contingency measures in its maintenance plan:

1. Installation of a vehicle emissions testing program
2. Asphalt paving (lower VOC formulation)
3. Diesel exhaust retrofits
4. Traffic flow improvements
5. Idle reduction programs
6. Portable fuel container regulation (statewide)
7. Park and ride facilities
8. Rideshare/carpool program
9. VOC cap/trade program for major stationary sources
10. NO_x Reasonably Available Control Technology

EPA has concluded that the maintenance plan adequately addresses the five basic components of a maintenance plan: attainment inventory, maintenance demonstration, monitoring network, verification of continued attainment, and a contingency plan. In addition, as required by section 175A(b) of the CAA, IDEM has committed to submit to EPA an updated ozone maintenance plan eight years after redesignation of the Indiana portion of the Cincinnati area to cover an additional ten years beyond the

initial 10-year maintenance period. Thus, EPA proposes to find that the maintenance plan SIP revision submitted by IDEM for the Indiana portion of the Cincinnati area meets the requirements of section 175A of the CAA.

V. Has the state adopted approvable motor vehicle emission budgets?

A. Motor Vehicle Emission Budgets

Under section 176(c) of the CAA, new transportation plans, programs, or projects that receive Federal funding or support, such as the construction of new highways, must "conform" to (i.e., be consistent with) the SIP. Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing air quality problems, or delay timely attainment of the NAAQS or interim air quality milestones. Regulations at 40 CFR part 93 set forth EPA policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities to a SIP. Transportation conformity is a requirement for nonattainment and maintenance areas. Maintenance areas are areas that were previously nonattainment for a particular NAAQS, but that have been redesignated to attainment with an approved maintenance plan for the NAAQS.

Under the CAA, states are required to submit, at various times, control strategy SIPs for nonattainment areas and

maintenance plans for areas seeking redesignations to attainment of the ozone standard and maintenance areas. *See* the SIP requirements for the 2008 ozone standard in EPA's March 6, 2015 implementation rule (80 FR 12264). These control strategy SIPs (including reasonable further progress plans and attainment plans) and maintenance plans must include MVEBs for criteria pollutants, including ozone, and their precursor pollutants (VOC and NOx for ozone) to address pollution from onroad transportation sources. The MVEBs are the portion of the total allowable emissions that are allocated to highway and transit vehicle use that, together with emissions from other sources in the area, will provide for attainment or maintenance. *See* 40 CFR 93.101.

Under 40 CFR part 93, a MVEB for an area seeking a redesignation to attainment must be established, at minimum, for the last year of the maintenance plan. A state may adopt MVEBs for other years as well. 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, if needed, subsequent to initially establishing a MVEB in the SIP.

B. What is the status of EPA's adequacy determination for the proposed VOC and NO_X MVEBs for the Cincinnati area?

When reviewing submitted control strategy SIPs or maintenance plans containing MVEBs, EPA must affirmatively find that the MVEBs contained therein are adequate for use in determining transportation conformity. Once EPA affirmatively finds that the submitted MVEBs are adequate for transportation purposes, the 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 MVEB 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; provision for 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 titled, "Transportation Conformity Rule Amendments: Response to Court Decision and Additional Rule Changes," 68 FR 38974, 38984 (June 30, 2003).

As discussed earlier, Indiana's maintenance plan includes NO_X and VOC MVEBs for the Cincinnati area for 2030 and 2020, the last year of the maintenance period and an interim year. EPA reviewed the VOC and NO_X MVEBs through the adequacy process. Indiana's February 23, 2016, maintenance plan SIP submission, including the VOC and NO_X MVEBs for the Indiana and Ohio portion of the Cincinnati area, was open for public comment on EPA's adequacy Web site on July 22, 2016, found at: http://www.epa.gov/otaq/stateresources/transconf/currsips.htm. The EPA public comment period on adequacy of the 2020 and 2030 MVEBs for the Indiana and Ohio portion of the Cincinnati area closed on August 22, 2016. No comments on the submittal were received during the adequacy comment period. The submitted maintenance plan, which included the MVEBs, was endorsed by the Governor (or his or her designee) and was subject to a state public hearing. The MVEBs were developed as part of an interagency consultation process which includes Federal, state, and local agencies. The MVEBs were clearly identified and precisely quantified. These MVEBs, when considered together

with all other emissions sources, are consistent with maintenance of the 2008 ozone standard.

Table 14. MVEBs for the Indiana and Ohio portion of the Cincinnati area, TPSD.

	Attainment Year 2014 Onroad Emissions	2020 Estimated Onroad Emissions	2020 Mobile Safety Margin Allocation	2020 MVEBs	2030 Estimated Onroad Emissions	2030 Mobile Safety Margin Allocation	2030 MVEBs
VOC	41.75	26.31	3.71	30.02	15.98	2.24	18.22
NO_X	50.66	27.11	3.68	30.79	14.28	1.94	16.22

As shown in Table 14, the 2020 and 2030 MVEBs are greater than the estimated 2020 and 2030 onroad sector emissions. In an effort to accommodate future variations in travel demand models and vehicle miles traveled forecast, IDEM allocated a portion of the safety margin (described further below) to the mobile sector. Indiana has demonstrated that the Cincinnati area can maintain the 2008 ozone NAAQS with mobile source emissions in the Indiana and Ohio portion of the area of 30.02 TPSD and 18.22 TPSD of VOC in 2020 and 2030, respectively, and 30.79 TPSD and 16.22 TPSD of NO_X in 2020 and 2030, respectively, since despite partial allocation of the safety margin, emissions will remain under attainment year emission levels. EPA has found adequate and is proposing to approve the MVEBs for use to determine transportation conformity in the Indiana and Ohio portion of the Cincinnati area, because EPA has determined that the area can maintain attainment of the 2008 ozone NAAQS for the relevant

maintenance period with mobile source emissions at the levels of the MVEBs.

C. What is a safety margin?

A "safety margin" is the difference between the attainment level of emissions (from all sources) and the projected level of emissions (from all sources) in the maintenance plan. As shown in Table 15 below, the emissions in the Indiana and Ohio portion of the Cincinnati area, excluding the Kentucky portion of the area, are projected to have safety margins of 70.48 TPSD for NO_X and 30.20 TPSD for VOC in 2030 (the difference between the attainment year, 2014, emissions and the projected 2030 emissions for all sources in just the Indiana and Ohio portion of the Cincinnati area). Similarly, there is a safety margin of 53.74 TPSD for NO_X and 20.18 TPSD for VOC in 2020.

Table 15. Safety margin for the Indiana and Ohio portion of the Cincinnati area, TPSD.

	Attainment Year 2014 Emissions from All Sources	2020 Estimated Emissions from All Sources	2020 Safety Margin Allocation	2030 Estimated Emissions from All Sources	2030 Safety Margin Allocation
VOC	114.56	94.38	20.18	84.36	30.20
NO_X	173.51	119.77	53.74	103.03	70.48

Even if emissions reached the full level of the safety margin, the counties would still demonstrate maintenance since emission levels would equal those in the attainment year.

As shown in Table 14 above, a portion of the safety margin for the Indiana and Ohio portion of the Cincinnati area is allocated to the mobile source sector. Specifically, in 2020, 3.71 TPSD and 3.68 TPSD of the VOC and NO_X safety margins, respectively, are allocated to the mobile source sector. In 2030, 2.24 TPSD and 1.94 TPSD of the VOC and NO_X safety margins, respectively, are allocated to the mobile source sector. The requested amount allocated to the MVEBs represents only a small portion of the 2020 and 2030 safety margins. Therefore, even though the requested MVEBs are greater than the projected onroad mobile source emissions for 2020 and 2030 contained in the demonstration of maintenance, the increase in onroad mobile source emissions that can be considered for transportation conformity purposes is well within the safety margins of the ozone maintenance demonstration. Further, once allocated to mobile sources, these safety margins will not be available for use by other sources.

VI. Has the state submitted approvable emission inventories?

A. The 2008 ozone NAAQS and emission inventory requirements.

CAA sections 172(c)(3) and 182(a)(1), 42 U.S.C. 7502(c)(3) and 7511a(a)(1), require states to develop and submit, as SIP revisions, emission inventories for all areas designated as nonattainment for any NAAQS, including the 2008 ozone NAAQS. An emission inventory for ozone is an estimation of actual

emissions of air pollutants that contribute to the formation of ozone in an area. Therefore, an emission inventory for ozone focuses on the emissions of VOC and NOx. VOC is emitted by many types of pollution sources, including power plants, industrial sources, onroad and nonroad mobile sources, smaller stationary sources, collectively referred to as area sources, and biogenic sources[7]. NO_X is primarily emitted by combustion sources, both stationary and mobile.

Emission inventories provide emissions data for a variety of air quality planning tasks, including establishing baseline emission levels (anthropogenic [manmade] emissions associated with ozone standard violations), calculating emission reduction targets needed to attain the NAAQS and to achieve reasonable further progress toward attainment of the ozone standard (not required in the area considered here), determining emission inputs for ozone air quality modeling analyses, and tracking emissions over time to determine progress toward achieving air quality and emission reduction goals. As stated above, the CAA requires the states to submit emission inventories for areas designated as nonattainment for ozone. For the 2008 ozone NAAQS, EPA has recommended that states submit typical summer day

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[7] Biogenic emissions are produced by living organisms and are typically not included in the base year emission inventories, but are considered in ozone modeling analyses, which must consider all emissions in a modeled area.

emission estimates for 2011 (78 FR 34178, 34190, June 6, 2013). States are required to submit estimates of VOC and NO_X emissions for four general classes of anthropogenic sources: stationary point sources; area sources; onroad mobile sources; and nonroad mobile sources.

B. Indiana's emission inventories.

Indiana's February 23, 2016 submission includes a SIP revision addressing the VOC and NO_X emission inventory requirement for the Indiana portion of the Cincinnati area. Table 16 summarizes the 2011 VOC and NO_X emissions for the Indiana portion of the Cincinnati area for a typical summer day (reflective of the summer period, when the highest ozone concentrations are expected in the nonattainment area).

Table 16. Indiana portion of Cincinnati Area 2011 Emission Inventory
(tons per day)

Source Type	VOC	NO_X
Non-EGU Point	4.01	2.71
EGU Point	0.27	15.08
Area	1.75	0.47
Onroad Mobile	1.33	1.89
Nonroad Mobile	0.42	0.53
Totals	7.78	20.68

IDEM estimated VOC and NO_X emissions for the Indiana portion of the Cincinnati area by totaling emissions within each source category. To develop the VOC and NOx emission inventories, IDEM used the procedures summarized below.

The primary source of emissions data for non-EGU point sources was source-reported 2011 Emission Inventory System (EIS) data. IDEM requires certain regulated stationary sources in the ozone nonattainment areas to submit EISs annually. An EIS contains detailed source type-specific or source unit-specific annual and seasonal actual emissions for all source units in a facility. The EIS data for all applicable facilities were used to calculate annual and summer day county-specific point source emissions. Because they are determinative, only the summer day emissions are summarized here.

EGU point source emissions data were obtained from EPA's Clean Air Markets Division (CAMD). CAMD collects and processes EGU emissions nationally.

For all point sources, IDEM has provided a detailed list of major point source facilities and their associated summer day VOC and NO_X emissions within appendix H of its February 23, 2016, submittal.

Nonroad mobile source emissions were estimated using EPA's National Mobile Inventory Model (NMIM). The emission estimates were processed through the Consolidated Community Emissions Processing Tool (CONCEPT) to spatially allocate the emissions to the county levels.

As described earlier, area, nonroad mobile, and point source emissions (EGUs and non-EGUs) were collected from the

Ozone NAAQS Implementation Modeling platform (2011v6.1). For 2011, this represents actual data reported to EPA by the states for the 2011 NEI. Because emissions data from state inventory databases, the NEI, and the Ozone NAAQS Emissions Modeling platform are annual totals, tons per summer day were derived according to EPA's guidance document "Temporal Allocation of Annual Emissions Using EMCH Temporal Profiles" dated April 29 2002, using the temporal allocation references accompanying the 2011v6.1 modeling inventory files.

Onroad mobile source emissions were developed in conjunction with the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and were calculated from emission factors produced by EPA's 2014 Motor Vehicle Emission Simulator (MOVES) model and data extracted from the region's travel-demand model.

IDEM applied standardized, EPA-recommended procedures and data completeness checks to quality assure (QA) (to assure data accuracy) and quality check (QC) (to assure data completeness) the emission calculations.

C. EPA's evaluation.

EPA has reviewed Indiana's February 23, 2016, submittal for consistency with CAA and EPA emission inventory requirements. In particular, EPA has reviewed the techniques used by IDEM to derive and quality assure the emission estimates. EPA has also determined that Indiana has provided the public with the

opportunity to review and comment on the development of the emission estimates and that the state has addressed all public comments.

1. Did the state adequately document the derivation of the emission estimates?

IDEM documented the procedures used to estimate the emissions for each of the major source types. The documentation of the emission estimation procedures is thorough and is adequate for us to determine that IDEM followed acceptable procedures to estimate the emissions.

2. Did the state quality assure the emission estimates?

IDEM developed a quality assurance plan and followed this plan during the various phases of the emissions estimation and documentation process to QA and QC the emissions for completeness and accuracy. These quality assurance procedures were summarized in the documentation describing how the emissions totals were developed. EPA has determined that the quality assurance procedures are adequate and acceptable. We conclude that Indiana has developed inventories of VOC and NO_X emissions that are comprehensive and complete.

3. Did the state provide for public review of the requested SIP revision?

IDEM notified the public of the opportunity for comment, and opened a comment period to solicit comments relevant to the

emission inventory and the entire submittal. IDEM has reported that no comments were received.

VII. Proposed actions.

EPA is proposing to determine that the Cincinnati nonattainment area is attaining the 2008 ozone standard, based on quality-assured and certified monitoring data for 2013-2015 and that the Indiana portion of this area has met the requirements for redesignation under section 107(d)(3)(E) of the CAA. EPA is thus proposing to approve IDEM's request to change the legal designation of the Indiana portion of the Cincinnati area from nonattainment to attainment for the 2008 ozone standard. EPA is also proposing to approve, as a revision to the Indiana SIP, the state's maintenance plan for the area. The maintenance plan is designed to keep the Cincinnati area in attainment of the 2008 ozone NAAQS through 2030. Additionally, EPA finds adequate and is proposing to approve the newly-established 2020 and 2030 MVEBs for the Indiana and Ohio portion of the Cincinnati area. Finally, EPA is proposing to approve the 2011 base year emissions inventory submitted by IDEM as meeting the base year emissions inventory requirement of the CAA for the Indiana portion of the Cincinnati area.

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

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

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, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because redesignation is an action that affects the status of a geographical area and does not impose any new regulatory requirements on tribes, impact any existing sources of air pollution on tribal lands, nor impair the maintenance of ozone national ambient air quality standards in tribal lands.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Oxides of nitrogen, Ozone, Volatile organic compounds.

Dated: December 12, 2016.

Robert A. Kaplan
Acting Regional Administrator, Region 5.

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