



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R06-OAR-2017-0435; FRL-9979-25-Region 6]

Approval and Promulgation of Implementation Plans; Arkansas; Interstate Transport Requirements for the 2012 PM_{2.5} NAAQS and Definition Update

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Pursuant to the Clean Air Act (CAA or Act), the Environmental Protection Agency (EPA) is proposing to approve portions of the Arkansas State Implementation Plan (SIP) submittal addressing the CAA requirement that SIPs address the potential for interstate transport of air pollution to significantly contribute to nonattainment or interfere with maintenance of the 2012 fine particulate matter (PM_{2.5}) National Ambient Air Quality Standards (NAAQS) in other states. EPA is proposing to determine that emissions from Arkansas sources do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with regard to the 2012 PM_{2.5} NAAQS. The EPA is also proposing to approve a revision to update incorporation by reference of NAAQS germane to this proposed action.

DATES: Written comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit your comments, identified by Docket Number EPA-R06-OAR-2017-0435, at <http://www.regulations.gov> or via email to fuirst.sherry@epa.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. The 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. The 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 Sherry Fuerst, 214-665-6454, fuerst.sherry@epa.gov. 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>.

Docket: The index to the docket for this action is available electronically at www.regulations.gov and in hard copy at the EPA Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas. While all documents in the docket are listed in the index, some information may be publicly available only at the hard copy location (e.g., copyrighted material), and some may not be publicly available at either location (e.g., CBI).

FOR FURTHER INFORMATION CONTACT: Sherry Fuerst, 214-665-6454, fuerst.sherry@epa.gov. To inspect the hard copy materials, please schedule an appointment with Ms. Fuerst or Mr. Bill Deese at 214-665-7253.

SUPPLEMENTARY INFORMATION: Throughout this document wherever “we,” “us,” or “our” is used, we mean the EPA.

I. Background

A. The PM_{2.5} NAAQS and Interstate Transport of Air Pollution

Under Section 109 of the CAA, we establish NAAQS to protect human health and public welfare. In 2012, we established a new annual NAAQS for PM_{2.5} of 12 micrograms per cubic

meter ($\mu\text{g}/\text{m}^3$), (78 FR 3085, January 15, 2013). The CAA requires states to submit, within three years after promulgation of a new or revised standard, SIPs meeting the applicable “infrastructure” elements of sections 110(a)(1) and (2). One of these applicable infrastructure elements, CAA section 110(a)(2)(D)(i), requires SIPs to contain provisions to prohibit certain adverse air quality effects on neighboring states due to interstate transport of pollution. There are four sub-elements within CAA section 110(a)(2)(D)(i). This action reviews how the first two sub-elements contained in CAA section 110(a)(2)(D)(i)(I) were addressed in an infrastructure SIP submission from Arkansas for the 2012 $\text{PM}_{2.5}$ NAAQS. These sub-elements require that each SIP for a new or revised NAAQS contain adequate provisions to prohibit any source or other type of emissions activity in one state that will “contribute significantly to nonattainment” or “interfere with maintenance” of the applicable air quality standard in any other state.

The EPA has addressed the interstate transport requirements of CAA section 110(a)(2)(D)(i)(I) with respect to $\text{PM}_{2.5}$ in several past regulatory actions. In 2011, we promulgated the Cross-State Air Pollution Rule (CSAPR, 76 FR 48208, August 8, 2011) in order to address the obligations of states – and of the EPA when states have not met their obligations – under CAA section 110(a)(2)(D)(i)(I) to prohibit air pollution contributing significantly to nonattainment in, or interfering with maintenance by, any other state with regard to several NAAQS, including the 1997 annual and 2006 24-hour $\text{PM}_{2.5}$ NAAQS.¹ In that rule, we considered states linked to downwind nonattainment or maintenance receptors² if they were projected by air quality modeling to contribute more than the threshold amount (1% of the standard) of $\text{PM}_{2.5}$ pollution for the 1997 and 2006 $\text{PM}_{2.5}$ NAAQS (76 FR 48208, 48239-43).

¹ Federal Implementation Plans; Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 FR 48207 (August 8, 2011) (codified as amended at 40 CFR 52.38 and 52.39 and 40 CFR part 97).

² Nonattainment or maintenance receptors are monitors projected to have air quality problems.

The EPA has not established a threshold amount for the 2012 PM_{2.5} NAAQS. In 2016 we provided an informational memorandum (the 2016 memo) about the steps states should follow as they develop and review SIPs that address this provision of the CAA for the 2012 PM_{2.5} NAAQS.³

B. Arkansas SIP Submittal Pertaining to the 2012 PM_{2.5} NAAQS and Interstate Transport of Air Pollution

On March 24, 2017, Arkansas submitted a SIP revision to address the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2012 PM_{2.5} NAAQS. The submittal stated that the State had adequate provisions to prohibit air pollutant emissions from within the State that significantly contribute to nonattainment or interfere with maintenance of the 2012 PM_{2.5} NAAQS stating, “Past contribution modeling by EPA for the 2006 PM_{2.5} NAAQS , included in ‘Air Quality Modeling Final Rule Technical Support Document’ published in June 2001 to support the Final Cross-State Air Pollution Rule (CSAPR) (76 FR 48208), demonstrated that Arkansas did not significantly contribute to nonattainment or interfere with maintenance of the annual PM_{2.5} NAAQS that was set in 1997 and retained in 2006.”⁴ Arkansas’s largest contribution to nonattainment for the 2006 annual PM_{2.5} NAAQS was 0.1 µg/m³ and Arkansas’s largest downwind contribution to maintenance of the 2006 PM_{2.5} annual standard was 0.04 µg/m³. Not only are both of these values below the 1% significance threshold for the annual PM_{2.5} NAAQS retained in 2006 (15 µg/m³), they are also below 1% of the 2012 PM_{2.5} NAAQS value of 12 µg/m³.”

³ Information on the Interstate Transport “Good Neighbor” Provision for the 2012 Fine Particulate Matter National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) March 17, 2016 from Stephen D. Page

⁴ Air Quality Modeling Final Rule Technical Support Document, June 2011
<http://www.epa.gov/airtransport/CSAPR/pdfs/AQModeling.pdf>.

We previously approved the portions of Arkansas's 2006 PM_{2.5} NAAQS i-SIP which addressed the requirements that emissions within Arkansas be prohibited from contributing to the nonattainment or interfere with maintenance of the NAAQS in other states (sub-elements 1 and 2). 78 FR 53269 (August 29, 2013). Based on our evaluation of the State's submission discussed below, we propose to approve the March 24, 2017 submittal intended to demonstrate that the SIP meets the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2012 PM_{2.5} NAAQS.

C. Revisions to the Arkansas SIP Definitions and National Ambient Air Quality Standards List

Included in the March 24, 2017 submission were updates to Regulation 19, Chapter 2 and Appendix B (Regulations of the Arkansas Plan of Implementation for Air Pollution Control) of the Arkansas Code Annotated § 8-4-201. We are proposing to approve the revised definition of “National Ambient Air Quality Standards” in Chapter 2 that changes the effective date to January 15, 2013. We also are proposing to approve the changes in Appendix B under “Particle Pollution, PM_{2.5}.” that reflect the update and apply the Chapter 2 definition to all Chapters of Regulation 19. Please see the Technical Support Document (TSD) for additional information and evaluation below.

II. The EPA's Evaluation

A. Pertaining to 110(a)(2)(D)(i)(I) for the 2012 PM_{2.5} NAAQS

As stated above, Section 110(a)(2)(D)(i) requires SIPs to include adequate provisions prohibiting any source or other type of emissions activity in one state that will (I) contribute significantly to nonattainment, or interfere with maintenance of the NAAQS in another state, and (II) interfere with measures required to prevent significant deterioration of air quality, or to protect visibility in another state. This action addresses only CAA Section 110(a)(2)(D)(i)(I).

EPA issued the 2016 memo about the steps states should follow and we will be following the framework outlined in the memo for our evaluation. The 2016 EPA memo outlined the four-step framework EPA has historically used to evaluate interstate transport under section 110(a)(2)(D)(i)(I), including the EPA's CSAPR.

- 1) Identification of potential downwind nonattainment and maintenance receptors;
- 2) Identification of upwind states contributing to downwind nonattainment and maintenance receptors;
- 3) For states identified as contributing to downwind air quality problem, identification of upwind emissions reductions necessary to prevent upwind states from significantly contributing to nonattainment or interfering with maintenance of receptors, and;
- 4) For states that are found to have emissions that significantly contribute to non-attainment or interfere with maintenance downwind, reducing the identified upwind emissions through adoption of permanent and enforceable measures.

Based on this approach, the potential receptors are outlined in Table 1 in the memo. Most of the potential receptors are in California, located in the San Joaquin Valley or South Coast nonattainment areas. However, there is also one potential receptor in Shoshone County, Idaho, and one potential receptor in Allegheny County, Pennsylvania.

The 2016 memo did note that because of data quality problems nonattainment and maintenance projections were not done for all or portions of Florida, Illinois, Idaho, Tennessee and Kentucky. After issuance of the memo, data quality problems were resolved for Idaho, Tennessee, Kentucky and most of Florida, identifying no additional potential receptors, with those areas having design values (DV) below the 2012 PM_{2.5} NAAQS and expected to maintain the NAAQS due to downward emission trends for NO_x and SO₂ (www.epa.gov/air-trends/air-quality-design-values and www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data). Florida certified in March 2018 its 2017 PM_{2.5} ambient air data for the counties in Florida that had had 2009-2013 data gaps, allowing us to develop 2015-2017 preliminary design

values. The preliminary design values indicate the highest value is $8 \mu\text{g}/\text{m}^3$ in Florida well below the NAAQS. For these reasons, we find that none of the counties in Florida with monitoring gaps between 2009-2013 should be considered either nonattainment or maintenance receptors for the 2012 $\text{PM}_{2.5}$ NAAQS, based on the 2015-2017 preliminary DV. Therefore, as of April 2018, only Illinois still has data quality issues preventing projections of nonattainment and maintenance receptors. As a result, Illinois will be evaluated below to determine if they have potential nonattainment or maintenance receptors for 2012 $\text{PM}_{2.5}$ NAAQS.

For “Step 1” of this evaluation, the areas identified as “potential downwind nonattainment and maintenance receptors” are:

- Seventeen potential receptors in California, located in the San Joaquin Valley or South Coast nonattainment areas;
- Shoshone County, Idaho;
- Allegheny County, Pennsylvania;
- All of Illinois

As stated above, “Step 2” is the identification of states contributing to downwind nonattainment and maintenance receptors, such that further analysis is required to identify necessary upwind reductions. For this step, we will be specifically determining if Arkansas emissions contribute to downwind nonattainment and maintenance receptors.

Each of the potential receptors is discussed below, with a more in-depth discussion provided in the TSD for this action. For additional information, links to the documents relied upon for this analysis can be found throughout the document, more information is available in the TSD and the documents can be found in the docket for this action.

California:

As described in our TSD, our analysis shows that Arkansas's $PM_{2.5}$ emissions and/or $PM_{2.5}$ precursors do not significantly impact the California potential receptors identified in the memo. In our analysis, we found specifically that the majority of the emissions impacting $PM_{2.5}$ levels in California are directly emitted $PM_{2.5}$ and/or $PM_{2.5}$ precursors from within the state, and that meteorological and topographic conditions serve as barriers to transport from Arkansas. We note that air quality designations are not relevant to our evaluation of interstate transport, however, the analysis developed for the 2012 annual $PM_{2.5}$ NAAQS designations process provides an in depth evaluation of factors critical in evaluating transport of $PM_{2.5}$ and $PM_{2.5}$ precursors, including evaluation of local emissions, wind speed and direction, topographical and meteorological conditions and seasonal variations recorded at the monitors, which all support the conclusion that Arkansas's $PM_{2.5}$ and $PM_{2.5}$ precursors do not significantly contribute to nonattainment or interfere with maintenance of the California potential receptors. Furthermore, Arkansas is more than 1,700 miles to the east and generally downwind of the California receptors.⁵

For these reasons, we propose to find that Arkansas does not significantly contribute to nonattainment, nor will it interfere with maintenance of the 2012 $PM_{2.5}$ NAAQS for California.

Shoshone County, Idaho:

As discussed in the TSD, our analysis shows that Arkansas's $PM_{2.5}$ emissions and/ or $PM_{2.5}$ precursors do not significantly impact the Idaho potential receptor identified in the memo. In our analysis, we found specifically that the majority of the emissions impacting $PM_{2.5}$ levels, came during the winter time and could be attributed to residential wood combustion.; The

⁵California: Imperial County, Los Angeles-South Coast Air Basin, Plumas County, San Joaquin Valley Area Designations for the 2012 Primary Annual $PM_{2.5}$ National Ambient Air Quality Standard Technical Support Document <https://www.regulations.gov/document?D=EPA-HQ-OAR-2012-0918-0330>.

analysis developed for the 2012 annual PM_{2.5} NAAQS designations process provide an in depth evaluation of factors that are useful in evaluating transport of PM_{2.5} and PM_{2.5} precursors, including evaluation of local emissions, wind speed and direction, topographical and meteorological conditions and seasonal variations recorded at the monitor, which all support the conclusion that Arkansas PM_{2.5} and PM_{2.5} precursors do not significantly contribute to nonattainment nor interfere with maintenance of the Idaho potential receptor.⁶ Furthermore, Arkansas is to the southeast and downwind of this receptor.

For these reasons, we propose to find that Arkansas does not significantly contribute to nonattainment, nor will it interfere with maintenance of the 2012 PM_{2.5} NAAQS for Shoshone, Idaho.

Allegheny County, Pennsylvania:

As discussed in the TSD, our analysis shows that Arkansas's PM_{2.5} emissions and/or PM_{2.5} precursors do not significantly impact the Allegheny County, Pennsylvania (Liberty monitor) potential receptor identified in the memo. In our analysis, we found that there were strong local influences throughout Allegheny County and contributions from nearby states that contributed to its nonattainment for both the 1997 and 2006 PM_{2.5} NAAQS. Contributors to the Liberty monitor in Allegheny County, Pennsylvania in recent years, have taken steps to improve air quality which will likely bring the monitor into compliance with the 2012 PM_{2.5} annual NAAQS by the 2021 attainment date.

⁶ Idaho: West Silver Valley Nonattainment Area- 2012 Primary Annual PM_{2.5} National Ambient Air Quality Standard Technical Support Document. Prepared by EPA Region 10.

Another compelling fact is that in previous modeling, nonattainment in Allegheny County, Pennsylvania was linked to significant contributions from other states.⁷ Arkansas was analyzed in this modeling, and emissions from Arkansas were not linked to Allegheny County.

For these reasons, we propose to find that Arkansas does not significantly contribute to nonattainment, nor will it interfere with maintenance of the 2012 PM_{2.5} NAAQS for Allegany County, Pennsylvania.

Illinois:

Due to ambient monitoring data gaps in the 2009-2013 data that would have been used to identify potential PM_{2.5} nonattainment and maintenance receptors in Illinois, the modeling analysis of potential receptors could not be completed for the state. As a result, the entire state is considered unclassifiable.

Arkansas was included in the CSAPR modeling analysis for the 1997 PM_{2.5} NAAQS. This analysis showed Illinois did have a nonattainment receptor identified through the CSAPR modeling analysis for the 1997 PM_{2.5} NAAQS. The receptor was in Madison, Illinois, located near St. Louis, Missouri. The modeling did not, however, show a linkage for nonattainment or maintenance between Arkansas and Illinois meaning Arkansas' impact was estimated to be less than 1% of the 1997 NAAQS at the Madison, Illinois receptor. While this modeling does not directly address the 2012 standard it is indicative that Arkansas emissions are unlikely to impact attainment or maintenance receptors in Illinois.

As further evidence, recent 3-year averages for the monitors in Madison, Illinois have shown downward trends. There are three active monitors in Madison. The 3-year averages for the monitors are shown in Table 1 below. Because of data gaps, the data cannot be used to

⁷ Air Quality Modeling for 2011 Cross-State Air Pollution Rule (CSAPR) (76 FR 48207, August 8, 2011).

establish a valid design value but can be used to show a downward trend. Also, as noted in the TSD for this action, Illinois has been collecting valid data for 2015 and 2016. This data, while not a complete three-year period indicates that air quality in Illinois is meeting the 2012 PM 2.5 NAAQS.

Table 1: Annual Standard 3-year Averages ($\mu\text{g}/\text{m}^3$) for Madison, Illinois Monitors

Monitor Number	2012-2014	2013-2015	2014-2016
171191007	12.9	11.6	10.8
171192009	10.4	9.7	9.4
171193007	12.5	10.8	10.1

For these reasons, we propose that Arkansas will not significantly contribute to nonattainment, nor will it interfere with maintenance of the 2012 PM_{2.5} NAAQS in Illinois.

Since we determined that Arkansas's SIP includes provisions prohibiting any source or other type of emissions activity from contributing significantly to nonattainment in, or interfering with maintenance of the NAAQS, in another state, steps 3 and 4 of this evaluation are not necessary.

In conclusion, based on our review of the potential receptors presented in the March 17, 2016 informational memo, an evaluation identifying likely emission sources affecting these potential receptors, and the 2014 base case modeling in CSAPR final rule, we propose to determine that emissions from Arkansas sources will not contribute significantly to nonattainment in, nor interfere with maintenance by, any other state with regard to the 2012 annual PM_{2.5} NAAQS.

B. Pertaining to Revisions to SIP Definition and the National Ambient Air Quality Standards List

The ADEQ submitted a collection of revisions to the Arkansas SIP on March 24, 2017. Included in these revisions is an update to the Arkansas SIP definition for the National Ambient Air

Quality Standards. The definition in Chapter 2 of Regulation 19 updates the incorporation by reference date included in 40 CFR part 50 from July 27, 2012 to January 15, 2013. The changes in the revised Appendix B to Regulation 19 titled the “National Ambient Air Quality Standards List” reflect the definition update and applies it to all Chapters of Regulation 19.

III. Proposed Action

We have determined that the revisions submitted on March 24, 2017, were developed in accordance with the CAA and EPA’s regulations. Therefore, under section 110 of the Act, the EPA proposes approval of the following revisions to the Arkansas SIP:

- The portion of the Arkansas SIP submittal, pertaining to interstate transport of air pollution demonstrating emissions from Arkansas will not significantly contribute to nonattainment or interfere with maintenance of the 2012 PM_{2.5} NAAQS in any other state pursuant to the requirements of CAA section 110(a)(2)(D)(i)(I).
- The portion of the Arkansas SIP submittal where the definition of National Ambient Air Quality Standards in Regulation 19, Chapter 2 is revised to be the effective date of January 15, 2013 and Appendix B to Regulation 19, “National Ambient Air Quality Standards List” at “Particle Pollution, PM_{2.5}” as consistent with the CAA.

IV. Incorporation by Reference

In this action, we are proposing to include in a final rule regulatory text that includes incorporation by reference. In accordance with the requirements of 1 CFR 51.5, we are proposing to incorporate by reference revisions to the Arkansas regulations as described in the Proposed Action section above. We have made, and will continue to make, these documents generally available electronically through www.regulations.gov and in hard copy at the EPA

Region 6 office (please contact Sherry Fuerst, 214-665-6454, fuerst.sherry@epa.gov for more information).

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve 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);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- 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, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Particulate matter.

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

Dated: June 26, 2018.

David Gray,
Acting Regional Administrator, Region 6.