



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2014-0450; FRL-9916-05-Region 9]

Approval and Promulgation of Implementation Plans; Arizona;
Nogales Nonattainment Area; Fine Particulate Matter Emissions
Inventories

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve revisions to the Arizona State Implementation Plan (SIP) concerning 2008 and 2010 emissions inventories for the 2006 24-hour fine particle (PM_{2.5}) National Ambient Air Quality Standard (NAAQS) for the Nogales PM_{2.5} nonattainment area. We are approving these annual emissions inventories under the Clean Air Act (CAA or the Act).

DATES: Any comments must arrive by **[INSERT DATE 30 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Submit comments, identified by docket number EPA-R09-OAR-2014-0450, by one of the following methods:

1. Federal eRulemaking Portal: www.regulations.gov. Follow the on-line instructions.
2. E-mail: wamsley.jerry@epa.gov.

3. Mail or deliver: Jerry Wamsley (Air-2), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105-3901.

Instructions: All comments will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through www.regulations.gov or e-mail. www.regulations.gov is an "anonymous access" system, and EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send e-mail directly to EPA, your e-mail address will be automatically captured and included as part of the public comment. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: Generally, documents in the docket for this action are available electronically at www.regulations.gov and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California

94105-3901. While all documents in the docket are listed at www.regulations.gov, some information may be publicly available only at the hard copy location (e.g., copyrighted material, large maps), and some may not be publicly available in either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Jerry Wamsley, EPA Region IX, (415) 947-4111, wamsley.jerry@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us," and "our" refer to EPA.

Table of Contents

- I. Background
 - A. *PM_{2.5} NAAQS*
 - B. *Designation of PM_{2.5} Nonattainment Areas*
 - C. *Submittal Requirements for PM_{2.5} Nonattainment Areas*
- II. Procedural Requirements for SIP Revisions
 - A. *Submittal for the Nogales Nonattainment Area*
- III. Analysis of Arizona's Submittal
 - A. *Nogales Area Emissions Inventories*
- IV. Proposed Action
- V. Statutory and Executive Order Reviews

I. Background

A. PM_{2.5} NAAQS

Under section 109 of the CAA, EPA establishes national ambient air quality standards (NAAQS or "standards") for certain pervasive air pollutants (referred to as "criteria pollutants") and conducts periodic reviews of the NAAQS to

determine whether they should be revised or whether new NAAQS should be established.

On July 18, 1997, EPA revised the NAAQS for particulate matter to add new standards for fine particles, using PM_{2.5} (particles less than or equal to 2.5 micrometers in diameter) as the indicator for the pollutant. EPA established primary and secondary annual and 24-hour standards for PM_{2.5} (62 FR 38652).¹ The annual standard was set at 15.0 micrograms per cubic meter (µg/m³), based on a 3-year average of annual mean PM_{2.5} concentrations, and the 24-hour standard was set at 65 µg/m³, based on the 3-year average of the 98th percentile of 24-hour PM_{2.5} concentrations at each population-oriented monitor within an area.

On October 17, 2006, EPA revised the level of the 24-hour PM_{2.5} NAAQS to 35 µg/m³, based on a 3-year average of the 98th percentile of 24-hour concentrations (71 FR 61144). In this same action, EPA also retained the 1997 annual PM_{2.5} standard at 15.0 µg/m³ based on a 3-year average of annual mean PM_{2.5} concentrations, but with tighter constraints on the spatial averaging criteria.

¹ For a given air pollutant, "primary" national ambient air quality standards are those determined by EPA as requisite to protect the public health, and "secondary" standards are those determined by EPA as requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. See CAA section 109(b).

B. Designation of PM_{2.5} Nonattainment Areas

Effective December 14, 2009, EPA established the initial air quality designations for most areas in the United States for the 2006 24-hour PM_{2.5} NAAQS (74 FR 58688, November 13, 2009). Among the various areas designated in 2009, EPA designated the Nogales area in Arizona as nonattainment for the 2006 24-hour PM_{2.5} NAAQS.² The boundaries for this area are described in 40 CFR 81.303.

C. Submittal Requirements for PM_{2.5} Nonattainment Areas

Section 172(c)(3) of the CAA requires a state with an area designated as nonattainment of a standard to submit a comprehensive, accurate, and current inventory of actual emissions for the nonattainment area for EPA's review and approval. EPA's requirements for an emissions inventory for the PM_{2.5} NAAQS are set forth in 40 CFR 51.1008.^{3,4} As applied to the

² The Nogales PM_{2.5} nonattainment area covers 76.1 square miles and is located in southern Santa Cruz County, Arizona adjacent to the international border with Mexico.

³ 40 CFR 51.1008(a)(2) and (b) do not apply for the Nogales area because they relate to requirements for attainment demonstrations and reasonable further progress (RFP); these requirements were suspended for the Nogales PM_{2.5} nonattainment area so long as the area continues to meet the PM_{2.5} standard. For further discussion of our Clean Data Policy as applied to the Nogales area, refer to our proposed rule (77 FR 65656, October 30, 2012) and final rule (78 FR 887, January 7, 2013).

⁴ Although the U.S. Court of Appeals for the District of Columbia (DC Circuit) recently remanded this rule and directed EPA to re-promulgate it pursuant to subpart 4 of part D, title I of the CAA (*see Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013)), the court's ruling in this case does not affect EPA's action on these emissions inventories. Subpart 4 of part D, title I of the Act contains no specific provision governing emissions inventories for PM₁₀ or PM_{2.5} nonattainment areas that supersedes the general emissions inventory requirement for all nonattainment areas in CAA section 172(c)(3). *See* "State Implementation Plans; General Preamble for the

2006 PM_{2.5} 24-hour NAAQS, this proposal is limited to the emissions inventories for directly emitted PM_{2.5} and PM_{2.5} precursors submitted by the Arizona Department of Environmental Quality (ADEQ) for the Nogales nonattainment area, as required under section 172(c)(3) of the CAA.

On January 7, 2013, EPA finalized a determination that the Nogales nonattainment area had attained the 2006 24-hour PM_{2.5} NAAQS (78 FR 887). This determination of attainment was based upon complete, quality-assured, and certified ambient air monitoring data showing that the Nogales nonattainment area had monitored attainment of the 2006 24-hour PM_{2.5} NAAQS over three years, from 2009 to 2011. Based on this determination, the requirements for Arizona to submit an attainment demonstration, reasonably available control measures, a reasonable further progress (RFP) plan, and contingency measures for failure to meet RFP and attainment deadlines were suspended for so long as the Nogales area continues to attain the 2006 24-hour PM_{2.5} NAAQS. The emissions inventory submittal requirement in CAA section 172(c)(3), however, is not suspended by our determination of attainment. Consequently, Arizona has submitted the Nogales area emissions inventories to address the 172(c)(3) requirement. Please see our October 30, 2012 proposed rule for

Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498, (April 16, 1992).

further discussion of EPA's Clean Data Policy and its application to the Nogales nonattainment area (77 FR 65656).

II. Procedural Requirements for SIP Revisions

Sections 110(a)(1) and 110(l) of the Act require states to provide reasonable notice and public hearing prior to adoption of SIP revisions. Section 110(k)(1)(B) requires EPA to determine whether a SIP submittal is complete within 60 days of receipt, but no later than 6 months after the date of the submittal. Any state submittal that we have not determined to be complete or incomplete will become complete by operation of law six months after the day of submittal. A finding of completeness does not approve the submittal as part of the SIP and it does not indicate that the submittal is approvable. A completeness finding starts a twelve month clock for EPA to act on the SIP submittal. See CAA section 110(k)(2).

A. Submittal for the Nogales Nonattainment Area

On September 6, 2013, Arizona submitted the 2008 and 2010 PM_{2.5} emissions inventories for the Nogales nonattainment area titled "Arizona State Implementation Plan Revision for the Nogales PM_{2.5} Nonattainment Area".⁵ Arizona's submittal provides

⁵ See letter from Eric Massey, Director, Air Quality Division, ADEQ to Jared Blumenfeld, Regional Administrator, USEPA, dated September 6, 2013 and enclosure titled "Arizona State Implementation Plan Revision for the Nogales PM_{2.5} Nonattainment Area". Included within Appendix A of this document is "Primary PM_{2.5} and Secondary Precursor Emissions Inventories for 2008 and 2010," July 26, 2013, Arizona Department of Environmental Quality (ADEQ), hereafter referred to as Appendix A. Because much of the detailed emissions

documentation of the public review process followed by the State prior to submitting the emissions inventories to EPA. The documentation provides evidence that reasonable notice of a public hearing was provided to the public and that a public hearing was conducted prior to submittal.⁶ Arizona's submittal of the Nogales nonattainment area emissions inventories became complete by operation of law on March 6, 2014.

Based on the documentation provided in Arizona's SIP revision submittal, we find that the Nogales area emissions inventories satisfies the procedural requirements of sections 110(a)(1) and 110(l) of the Act for revising SIPs.

III. Analysis of Arizona's Submittal

Section 172(c)(3) of the CAA requires states to submit a comprehensive, accurate, and current inventory of actual emissions for each nonattainment area. EPA's requirements for an emissions inventory for the PM_{2.5} NAAQS are set forth in 40 CFR 51.1008. For the PM_{2.5} NAAQS, the pollutants to be inventoried are PM_{2.5} and PM_{2.5} precursors (i.e., nitrogen oxides (NO_x), volatile organic compounds (VOCs), sulfur dioxide (SO₂), and ammonia (NH₃)).⁷

inventory information and analyses for the submittal document are located within Appendix A, this document is the substantive focus of this proposal.

⁶ A public hearing was conducted on September 3, 2013 after 30 days prior notice. See Enclosure 4 of the submittal for public notice documentation and public hearing transcripts.

⁷ Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze

A. Nogales Area Emissions Inventories

Arizona's submitted Nogales area emissions inventories provide annual 2008 and 2010 emissions estimates (tons per year) for PM_{2.5} and PM_{2.5} precursors (i.e., NO_x, VOCs, SO₂, and NH₃). The source categories include non-road mobile sources, non-point sources, on-road mobile sources, and point or stationary sources. A summary of the Nogales area emissions inventories are provided below in Tables 1 and 2. The detailed Nogales emissions inventories are found in Appendix A of Arizona's submittal.

Table 1, 2008 Nogales Nonattainment Area Emissions Inventories (tons per year)

Source Category	PM _{2.5}	VOC	NO _x	SO ₂	NH ₃
Non-Road Mobile	13.1	158.6	142.7	2.8	0.1
Non-Point	396.0	902.7	48.8	28.3	22.9
On-Road Mobile	25.1	426.2	912.9	7.5	14.4
Point/Stationary	1.4	3.3	11.0	0.5	0
TOTALS	435.6	1490.8	1115.4	39.1	37.4

Entries are rounded consistent with submittal, as such, totals may vary due to rounding. Source: Appendix A, Table 6.1.

Table 2, 2010 Nogales Nonattainment Area Emissions Inventories (tons per year)

Source Category	PM _{2.5}	VOC	NO _x	SO ₂	NH ₃
Non-Road Mobile	13.1	159.6	142.7	2.8	0.1
Non-Point	399.2	912.6	49.3	28.3	23.0
On-Road Mobile	20.1	369.5	743.7	4.6	13.0

Point/Stationary	1.4	3.3	11.0	0.5	0
TOTALS	433.9	1445.0	946.8	36.2	36.1

Entries are rounded consistent with submittal, as such, totals may vary due to rounding. Source: Appendix A, Table 6.1.

The Nogales area primary PM_{2.5} and secondary precursor emissions inventories for 2008 and 2010 include emissions estimates from non-road mobile, non-point, on-road mobile sources, and point or stationary sources. ADEQ derived these emissions inventories for 2008 and 2010 from emissions data for Santa Cruz County, Arizona, in EPA's 2008 National Emissions Inventory (NEI) versions 1.5 and 2.0. See Appendix A, section 3. Using 2008 NEI county-level emissions estimates, ADEQ allocated the share of nonattainment area emissions from county level estimates by one of three characteristics and relative percentages: (1) human-induced activities/source categories were allocated by nonattainment area population share, 66.1 percent; (2) location-based activities/source categories were allocated by nonattainment area share of land area, 6.15 percent; and, (3) location specific sources, such as point sources, were fully allocated to the nonattainment area, as applicable. See Appendix A, Table 3.1 for population and land area allocation ratios; and, see Appendix A, section 2 for their derivation. In the case of on-road mobile source emissions, ADEQ estimated Santa Cruz County emissions separately from the NEI data using EPA's on-road emissions factor model MOVES2010b and then allocated

county-level emissions to the Nogales area by population share. ADEQ developed 2010 emissions inventory estimates for the Nogales nonattainment area from 2008 levels by applying a 2008 to 2010 population-based growth rate of 1.1 percent, relative activity levels, or held emissions estimates constant, as applicable. See Appendix A, section 3.4 for ADEQ's 2010 emissions inventories discussion.

In sum, we find this methodology reasonable and based on reliable estimates of population and land area. We concur with the overall methodology, basis for allocating emissions and allocation calculations used to produce the Nogales emissions inventories for PM_{2.5} and the precursor pollutants. ADEQ's population estimates are Arizona Department of Administration estimates that have been reconciled with U.S. Census figures. We have verified the land area allocation ratio using geographical information system applications. Please see our Technical Support Document (TSD) for our detailed review and discussion of Arizona's emissions inventories methodology and results.

In our review, we compared the ADEQ estimates for PM_{2.5} and the precursor pollutants with the subsequent and final release of the 2008 NEI version 3.0. The 2011 NEI version 1.0 was released on September 30, 2013 and was not available for use by ADEQ. We expected to find nominal differences between the NEI versions

(1.5 and 2.0) used by ADEQ and the final version (3.0) of the NEI based on corrections and re-estimates from one version to the next. EPA released the 2008 NEI version 3.0 in March 2013 prior to Arizona's submittal of the Nogales emissions inventories in September 2013. While we did not require ADEQ to use the 2008 NEI version 3.0 given their emissions inventories were already drafted, we reviewed the submittal against 2008 NEI version 3.0 to ensure that any subsequent version 3.0 corrections or updates are nominal changes to the submitted emissions inventories.

We found that the submitted PM_{2.5}, NH₃, NO_x, and SO₂ emissions inventories, four of five emissions inventories, show little or no variance from the 2008 NEI version 3.0 emissions inventory, our comparison data base. The submitted VOC emissions inventory shows a small under-reporting of 3 - 10 percent when compared either across the Santa Cruz County 2008 NEI version 3.0 baseline emissions estimates, or to the submitted Nogales area emissions estimates. This small overall underestimate of VOC emissions is not significant, and becomes less significant when considered against an adjusted increase provided by the submitted VOC on-road mobile emissions inventory compared to the reference 2008 NEI on-road mobile VOC emissions estimates. In this way, we consider the adjusted difference in the submitted overall VOC emission inventory and our reference 2008 NEI version 3.0 VOC emissions inventory to be closer to 3 percent rather than 10

percent, a small variance in the context of the overall PM_{2.5} emissions inventories. For our detailed review, please see our TSD within the docket of this rulemaking.

In conclusion, EPA has reviewed the results, procedures, and methodologies Arizona used to produce the 2008 and 2010 Nogales area PM_{2.5} and PM_{2.5} precursor emissions inventories and finds that these emissions inventories meet the requirements of the CAA and EPA guidance. Consequently, we propose to approve the submitted PM_{2.5}, NH₃, NO_x, SO₂, and VOC emissions inventories as meeting the CAA's section 172(c)(3) requirement to provide a comprehensive, accurate, and current inventory of actual emissions for the Nogales nonattainment area.⁸

IV. Proposed Action

EPA is proposing to approve the 2008 and 2010 Nogales nonattainment area PM_{2.5} and PM_{2.5} precursor emissions inventories submitted by Arizona on September 6, 2013. In doing so, EPA has determined that Arizona's submittal is consistent with sections 110 and 172(c)(3) of the CAA.

V. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of

⁸ Please note that our review and proposed approval of Arizona's PM_{2.5} emissions inventories for the Nogales nonattainment area, their data sources, and methodologies are specific to this submittal and may not be applicable to all PM_{2.5} nonattainment areas and the related PM_{2.5} and precursor emissions inventories.

the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. 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 Order 12866 (58 FR 51735, October 4, 1993);
- 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 Clean Air Act; and
- does not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this action does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control,
Incorporation by reference, Intergovernmental relations,

Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Ammonia, Volatile organic compounds.

Dated: August 20, 2014.

Jared Blumenfeld,
Regional Administrator,
Region IX.

[FR Doc. 2014-20787 Filed
08/29/2014 at 8:45 am; Publication Date: 09/02/2014]