

The EPA Administrator, Michael S. Regan, signed the following notice on 12/06/2024, and EPA is submitting it for publication in the Federal Register (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's govinfo website (<https://www.govinfo.gov/app/collection/fr>) and on Regulations.gov (<https://www.regulations.gov>) in Docket No. EPA-HQ-OAR-2015-0072. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 50 and 58

[EPA-HQ-OAR-2015-0072; FRL-8635.1-02-OAR]

RIN 2060-AW48

Reconsideration of the National Ambient Air Quality Standards for Particulate Matter;

Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule; correction.

SUMMARY: The Environmental Protection Agency (EPA) is correcting a final rule published in the *Federal Register* on March 6, 2024, that became effective on May 6, 2024. The final rule revised the primary annual PM_{2.5} standard by lowering the level from 12.0 µg/m³ to 9.0 µg/m³, retained the current primary 24-hour PM_{2.5} standard and the primary 24-hour PM₁₀ standard, retained the secondary 24-hour PM_{2.5} standard, secondary annual PM_{2.5} standard, and secondary 24-hour PM₁₀ standard, and finalized revisions to the Air Quality Index (AQI) and monitoring requirements for the national ambient air quality standards for particulate matter (PM NAAQS). After publication, the EPA became aware of an error in the preamble text regarding the due date for infrastructure State implementation plan (infrastructure SIP) submissions for the 2024 PM NAAQS. With this action, the EPA is clarifying the due date for infrastructure SIP submissions for the 2024 PM NAAQS. The EPA is also correcting inadvertent errors in the PM_{2.5} monitoring regulatory text. These corrections do not include any substantive changes to the final rule.

DATES: This correction is effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: The EPA has established a docket for the final rule under Docket ID No. EPA-HQ-OAR-2015-0072. All documents in the docket are listed on the *www.regulations.gov* website. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy. Publicly available docket materials are available electronically through *www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Mr. Tim Hanley, Air Quality Assessment Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C304-06, Research Triangle Park, NC 27711; telephone: (919) 541-4417; email: *hanley.tim@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. What is the authority for this action?

The EPA is making a correction to the deadline for infrastructure SIP submissions under its authority provided in section 110 of the Clean Air Act (CAA) (42 U.S.C. § 7410). Section 110(a)(1) states that “Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality

control region (or portion thereof) within such State. In addition, such State shall adopt and submit to the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.”

Section 110(a)(2)(B) states that, “Each implementation plan submitted by a State under this chapter shall be adopted by the State after reasonable notice and public hearing. Each such plan shall . . . provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile, and analyze data on ambient air quality, and (ii) upon request, make such data available to the Administrator.”

The EPA is also acting under the authority provided by CAA sections 103, 105, 110, 114, 301, 311, 314, and 319, which direct the EPA to develop and implement measures to conduct ambient air quality surveillance. Under this authority, this action implements minor, non-substantive typographical and technical corrections to conform the 40 CFR part 58 regulatory text to the rule’s preamble and remedies regulatory text formatting errors.

B. What corrective action is the Agency taking?

In the proposed rule published on January 27, 2023 (88 FR 5558), the preamble states that “Under CAA sections 110(a)(1), all states are required to make these infrastructure SIP submissions within 3 years after promulgation of a new or revised primary standard.” However, in the final rule published on March 6, 2024 (89 FR 16202), the preamble incorrectly and

inadvertently states that “Under CAA section 110(a)(1), all States are required to make these infrastructure SIP submissions within three years after the effective date of a new or revised primary standard. While the CAA authorizes the EPA to set a shorter time for States to make these SIP submissions, the EPA is requiring submission of infrastructure SIPs within three years of the effective date of this revised primary annual PM_{2.5} NAAQS.”

Pursuant to CAA section 110(a)(1), infrastructure SIP submissions are not due within three years of the effective date, but within three years of the promulgation of a new or revised NAAQS. The EPA has traditionally held that “promulgation” means the signature and widespread dissemination of a final rulemaking in the context of the NAAQS. Per this standard practice, because the EPA promulgated (signed and made available on the EPA’s website) the reconsideration of the PM_{2.5} NAAQS on February 7, 2024, infrastructure SIP submissions are due by no later than February 7, 2027.

To be consistent with the CAA and the proposed rule, the EPA is correcting the last two sentences of the first paragraph of *B. Section 110(a)(1) and (2) Infrastructure SIP Requirements* in the final rule preamble to read, “Under CAA section 110(a)(1), all States are required to make these infrastructure SIP submissions within three years after the promulgation date of a new or revised primary standard. While the CAA authorizes the EPA to set a shorter time for States to make these SIP submissions, the EPA is requiring submission of infrastructure SIPs within three years of the promulgation date of this revised primary annual PM_{2.5} NAAQS.”

The EPA is also making several corrections to inadvertent errors in the PM_{2.5} monitoring regulatory text for the final rule, as described below.

After publication, it was realized that the EPA did not add promulgated section 50.20 to the 40 CFR 50.3 list of sections containing PM_{2.5} standards, which was inconsistent with past

NAAQS regulations. Therefore, in 40 CFR 50.3, the EPA is adding section 50.20 to its list of sections containing PM_{2.5} standards to be consistent with all existing PM_{2.5} standards and methods.

The EPA proposed to adjust the minimum value required by appendix A, section 3.2.4, to be considered valid sample pairs for the PM_{2.5} Performance Evaluation Program (PEP) from 3 µg/m³ to 2 µg/m³ (88 FR 5665, January 27, 2023). In section 3.2.4 of appendices A and B to Part 58, the EPA finalized 2 µg/m³ for the quality assurance program that assesses PM_{2.5} network bias. However, in the final rule, section 4(c)(5) in appendices A and B, which provides the PM_{2.5} limit for use in bias assessments, was not updated to reflect the finalized 2 µg/m³ for PM_{2.5} and instead states the previous 3 µg/m³, which is inconsistent with section 3.2.4 in the two appendices. Within the PM NAAQS, the same criteria should be used for PM_{2.5} for consistency. Therefore, the EPA is correcting section 4(c)(5) of appendices A and B to Part 58 to be consistent with section 3.2.4 of appendices A and B to Part 58.

In the PM NAAQS Reconsideration proposed rule (88 FR 5665, January 27, 2023), the EPA proposed to revise equation 6 in section 4.2.1 of appendices A and B to Part 58. The proposed equation 6 had a plus sign in the denominator. However, in the final rule, the EPA inadvertently published equation 6 with a minus sign in the denominator instead of a plus sign. Therefore, the EPA is correcting the denominator in Equation 6 of section 4.2.1 in appendices A and B by changing the minus sign to a plus sign, which is consistent with what was proposed.

In section 2.2.2 in appendix C to Part 58, the EPA is correcting a typo by replacing “multijusinstincional” with “multijurisdictional.”

Appendix C to Part 58 of the final rule’s regulatory text had an incorrect instruction to remove and reserve sections 2.4 and 2.4.1 and remove sections 2.4.1. through 2.4.1.7. The EPA’s

intention was to reserve all of section 2.4, which includes sections 2.4.1 through 2.4.6 and their subsections, and to remove sections 2.4.1.1 through 2.4.1.7. However, due to the EPA's confusing instructions, only sections 2.4 and 2.4.1 were reserved. To correct this issue, the EPA is reserving sections 2.4.2 through 2.4.6 of appendix C to Part 58, including their subsections, so that all of section 2.4 is reserved as intended.

Also, when the EPA reserved section 2.4 in appendix C to Part 58, the EPA revoked language associated with Approved Regional Methods (ARMs). However, after publication, several mentions of the revoked term "ARM" and references to the reserved section 2.4 were left in appendices A and C to Part 58. To correct this issue, the EPA is removing the revoked term "ARM" and references to the reserved section 2.4 from section 3.2.4.2 in appendix A to Part 58 and sections 2.7.1, 2.8.4, 2.7.6, 2.8.1, 2.8.5, and 3.1 in appendix C to Part 58.

Lastly, after publication of the final rule, the EPA became aware that, in the finalized tables E-3 and E-6 of appendix E to Part 58, several merged cells were inadvertently unmerged, resulting in misalignment of the data presented for each pollutant-specific row in the tables. The EPA is correcting this error by providing reformatted tables E-3 and E-6 so that each pollutant-specific row and the information in each column is displayed correctly.

II. Rulemaking Procedures

Section 553(b)(B) of the Administrative Procedure Act (APA), 5 U.S.C. § 553(b)(B), provides that when an agency for good cause finds that public notice and comment procedures are impracticable, unnecessary, or contrary to the public interest, the agency may issue a rule without providing notice and an opportunity for public comment. The EPA has determined that there is good cause for making this correction final without prior proposal. In this instance, notice and opportunity for comment is unnecessary because this action implements minor, non-

substantive typographical and technical corrections that correct preamble language in one instance, conform the regulatory text to the rule’s preamble, and remedy formatting errors.

Moreover, EPA has determined that there is good cause for making this final rule effective less than 30 days after publication in the Federal Register. Section 553(d)(3) of the APA, 5 U.S.C. § 553(d)(3), provides that final rules shall not become effective until 30 days after publication in the Federal Register “except . . . as otherwise provided by the agency for good cause found and published with the rule.” “In determining whether good cause exists, an agency should ‘balance the necessity for immediate implementation against principles of fundamental fairness which require that all affected persons be afforded a reasonable amount of time to prepare for the effective date of its ruling.’” *Omnipoint Corp. v. Fed. Comm’n Comm’n*, 78 F.3d 620, 630 (D.C. Cir. 1996) (quoting *United States v. Gavrilovic*, 551 F.2d 1099, 1105 (8th Cir. 1977)). This action adjusts a deadline that will not apply for at least two years (from May 6, 2027, to February 7, 2027) and makes only minor technical and typographical corrections to the monitoring provisions that are not connected to immediate regulatory obligations.

For these reasons, the Agency finds that good cause exists under APA section 553(d)(3) to make this rule effective on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

III. Statutory and Executive Orders Reviews

Additional information about these statutes and Executive Orders can be found at

<https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 14094:

Modernizing Regulatory Review

This action is not a significant regulatory action as defined by Executive Order 12866, as amended by Executive Order 14094 and was, therefore, not subject to a requirement for Executive Order 12866 review.

B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. The EPA is clarifying the due date for infrastructure SIP submissions for the 2024 PM NAAQS and correcting inadvertent errors in the PM_{2.5} monitoring regulatory text. However, the OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060–0084.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. Rather, this action corrects inadvertent errors in the final rule’s preamble and regulatory text.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of \$100 million or more as described in the Unfunded Mandates Reform Act (UMRA), 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action corrects inadvertent errors in the final rule’s preamble and regulatory text.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have Tribal implications, as specified in Executive Order 13175. It does not have a substantial direct effect on one or more Indian Tribes as Tribes are not obligated to adopt or implement any NAAQS. In addition, Tribes are not obligated to conduct ambient monitoring for PM or to adopt the ambient monitoring requirements of 40 CFR part 58. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk. This action corrects inadvertent errors in the final rule’s preamble and regulatory text.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

The final rule involved environmental monitoring or measurement. The PM NAAQS final rule maintained the use of the existing indicators for fine (PM_{2.5}) and coarse (PM₁₀) particles. The indicator for fine particles is measured using the Reference Method for the Determination of Fine Particulate Matter as PM_{2.5} in the Atmosphere (appendix L to 40 CFR part

50), which is known as the PM_{2.5} FRM, and the indicator for coarse particles is measured using the Reference Method for the Determination of Particulate Matter as PM₁₀ in the Atmosphere (appendix J to 40 CFR part 50), which is known as the PM₁₀ FRM. To the extent feasible, the EPA employs a Performance-Based Measurement System (PBMS), which does not require the use of specific, prescribed analytic methods. The PBMS is defined as a set of processes wherein the data quality needs, mandates or limitations of a program or project are specified and serve as criteria for selecting appropriate methods to meet those needs in a cost-effective manner. It is intended to be more flexible and cost effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. This action corrects inadvertent errors in the monitoring regulatory text for parts 50 and 58.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this correction does not concern human health or environmental conditions and, therefore, cannot be evaluated with respect to potentially disproportionate and adverse effects on people of color, low-income populations and/or indigenous peoples. This action corrects inadvertent errors in the final rule's preamble and regulatory text.

Although this action does not concern human health or environmental conditions, the EPA identified and addressed environmental justice concerns in the underlying final rule in sections II.A.2, II.B.3.a, II.B.3.c, II.B.2, and II.B.4. of the final rule preamble and also in the 2019 Integrated Science Assessment, Supplement to the 2019 Integrated Science Assessment, and 2022 Policy Assessment.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. The CRA allows the issuing agency to make a rule effective sooner than otherwise provided by the CRA if the agency makes a good cause finding that notice and comment rulemaking procedures are impracticable, unnecessary or contrary to the public interest (5 U.S.C. 808(2)). The EPA has made a good cause finding for this rule as discussed in the **SUPPLEMENTARY INFORMATION** section. The EPA has determined that there is good cause for making this correction final without prior proposal. In this instance, notice and opportunity for comment is unnecessary because this action implements minor, non-substantive typographical and technical corrections that conform the regulatory text to the rule's preamble and remedy formatting errors.

List of Subjects

40 CFR Part 50

Environmental protection, Air pollution control, Particulate matter.

40 CFR Part 58

Environmental protection, Administrative practice and procedure, Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements.

Michael S. Regan,
Administrator.

Accordingly, 40 CFR parts 50 and 58 are corrected by making the following correcting amendments:

PART 50—NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS

1. The authority citation for Part 50 continues to read as follows:

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

* * * * *

2. Revise § 50.3 to read as follows:

§ 50.3 Reference conditions.

All measurements of air quality that are expressed as mass per unit volume (e.g., micrograms per cubic meter) other than for particulate matter (PM_{2.5}) standards contained in §§ 50.7, 50.13, 50.18, and 50.20, and lead standards contained in § 50.16 shall be corrected to a reference temperature of 25 (deg) C and a reference pressure of 760 millimeters of mercury (1,013.2 millibars). Measurements of PM_{2.5} for purposes of comparison to the standards contained in §§ 50.7, 50.13, 50.18, and 50.20, and of lead for purposes of comparison to the standards contained in § 50.16 shall be reported based on actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.

* * * * *

PART 58—AMBIENT AIR QUALITY SURVEILLANCE

3. The authority citation for Part 58 continues to read as follows:

Authority: 42 U.S.C. 7403, 7405, 7410, 7414, 7601, 7611, 7614, and 7619.

* * * * *

4. Amend appendix A to Part 58 by revising section 3.2.4.2, and section 4(c)(5), and equation 6 in section 4.2.1 to read as follows:

Appendix A to Part 58—Quality Assurance Requirements for Monitors used in Evaluations of National Ambient Air Quality Standards

* * * * *

3.2.4.2 Have all FRM and FEM samplers subject to a PEP audit at least once every 6 years, which equates to approximately 15 percent of the monitoring sites audited each year.

* * * * *

4. * * *

(c) * * *

(5) PM_{2.5}: 2 µg/m³.

* * * * *

4.2.1 * * *

Equation 6 to Section 4.2.1 of Appendix A

$$t_i = \frac{X_i - Y_i}{\sqrt{(X_i + Y_i)/2}}$$

* * * * *

5. Amend appendix B to Part 58 by revising section 4(c)(5) and equation 6 in section 4.2.1 to read as follows:

Appendix B to Part 58—Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring

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4. * * *

(c) * * *

(5) PM_{2.5}: 2 µg/m³.

* * * * *

4.2.1 * * *

Equation 6 to Section 4.2.1 of Appendix B

$$t_i = \frac{X_i - Y_i}{\sqrt{(X_i + Y_i)/2}}$$

* * * * *

6. Amend appendix C to Part 58 by revising section 2.2.2, reserving sections 2.4.2 through 2.4.6 , and revising sections 2.7.1, 2.7.4, 2.7.6, 2.8.1, 2.8.5 and 3.1 to read as follows:

Appendix C to Part 58—Ambient Air Quality Monitoring Methodology

* * * * *

2.2.2 A request to update a designated methods calibration may be initiated by the instrument manufacturer of record or the EPA Administrator. State, local, Tribal, and multijurisdictional organizations of these entities may work with an instrument manufacture to update a designated method calibration.

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2.4 * * *

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2.4.2 – 2.4.6 [Reserved]

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2.7.1 Requests for approval under sections 2.2, 2.6.2, or 2.8 of this appendix must be submitted to: Director, Center for Environmental Measurement and Modeling, Reference and Equivalent Methods Designation Program (MD-D205-03), U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711.

* * * * *

2.7.4 To the extent that such incorporation by reference provides data or information required by this section (2.7) or by sections 2.5 or 2.6 of this appendix, independent data or duplicative information need not be submitted.

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2.7.6 If the Administrator determines, on the basis of any available information, that any of the determinations or statements on which approval of a request under this section was based are invalid or no longer valid, or that the requirements of section 2.5 or 2.6, as applicable, have not been met, he/she may withdraw the approval after affording the person who obtained the approval an opportunity to submit information and arguments opposing such action.

* * * * *

2.8.1 Except as otherwise provided in this section, no reference method or equivalent method may be used in a SLAMS network if it has been modified in a manner that could significantly alter the performance characteristics of the method without prior approval by the Administrator.

For purposes of this section, “alternative method” means an analyzer, the use of which has been approved under section 2.5 or 2.6 of this appendix or some combination thereof.

* * * * *

2.8.5 A temporary modification that could alter the performance characteristics of a reference or equivalent may be made without prior approval under this section if the method is not functioning or is malfunctioning, provided that parts necessary for repair in accordance with the applicable operation manual cannot be obtained within 45 days. Unless such temporary modification is later approved under section 2.8.4 of this appendix, the temporarily modified method shall be repaired in accordance with the applicable operation manual as quickly as practicable but in no event later than 4 months after the temporary modification was made, unless an extension of time is granted by the Administrator. Unless and until the temporary modification is approved, air quality data obtained with the method as temporarily modified must be clearly identified as such when submitted in accordance with § 58.16 and must be accompanied by a report containing the information specified in section 2.8.3 of this appendix. A request that the Administrator approve a temporary modification may be submitted in accordance with sections 2.8.1 through 2.8.4 of this appendix. In such cases, the request will be considered as if a request for prior approval had been made.

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3.1 Methods employed in NCore multipollutant sites used to measure SO₂, CO, NO₂, O₃, PM_{2.5}, or PM_{10-2.5} must be reference or equivalent methods as defined in § 50.1 of this chapter for any monitors intended for comparison with applicable NAAQS.

* * * * *

7. Amend appendix E to Part 58 by revising table E-3 to section 2.7 and table E-6 to section 3.8 to read as follows:

Appendix E to Part 58—Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring

Table E-3 to Section 2.7 of Appendix E—Summary of Probe Siting Criteria

Pollutant	Scale⁹	Height from ground to probe⁸ (meters)	Horizontal or vertical distance from supporting structures¹⁸ to probe inlet (meters)	Distance from drip line of trees to probe⁸ (meters)	Distance from roadways to probe⁸ (meters)
SO₂^{2 3 4 5}	Middle, Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	N/A.
CO^{3 4 6}	Micro [downtown or street canyon sites]	2.5-3.5	≥1.0	≥10	2.0-10 for downtown areas or street canyon microscale.
CO^{3 4 6}	Micro [Near-Road sites]	2.0-7.0	≥1.0	≥10	≤50 for near-road microscale.
CO^{3 4 6}	Middle and Neighborhood	2.0-15	≥1.0	≥10	See Table E-2 of this appendix for middle and neighborhood scales.
O₃^{2 3 4}	Middle, Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	See Table E-1.
NO₂^{2 3 4}	Micro	2.0-7.0	≥1.0	≥10	≤50 for near-road microscale.
NO₂^{2 3 4}	Middle, Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	See Table E-1.

PAMS^{2 3 4} Ozone precursors	Neighborhood and Urban	2.0-15	≥1.0	≥10	See Table E-1.
PM, Pb^{2 3 4} 7	Micro	2.0-7.0	≥2.0 (horizontal distance only)	≥10	See Figure E-1.
PM, Pb^{2 3 4} 7	Middle, Neighborhood, Urban and Regional	2.0-15	≥2.0 (horizontal distance only)	≥10	See Figure E-1.

N/A—Not applicable.

¹ When a probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on the roof.

² Should be greater than 20 meters from the dripline of tree(s) and must be 10 meters from the dripline.

³ Distance from sampler or probe inlet to obstacle, such as a building, must be at least twice the height the obstacle protrudes above the sampler or probe inlet. Sites not meeting this criterion may be classified as microscale or middle scale (see paragraphs 2.3(a) and 2.3(c)).

⁴ Must have unrestricted airflow in a continuous arc of at least 270 degrees around the probe or sampler; 180 degrees if the probe is on the side of a building or a wall for street canyon monitoring.

⁵ The probe or sampler should be away from minor sources, such as furnace or incineration flues. The separation distance is dependent on the height of the minor source emission point(s), the type of fuel or waste burned, and the quality of the fuel (sulfur, ash, or lead content). This criterion is designed to avoid undue influences from minor sources.

⁶ For microscale CO monitoring sites, the probe must be ≥10 meters from a street intersection and preferably at a midblock location.

⁷ Collocated monitor inlets must be within 4.0 meters of each other and at least 2.0 meters apart for flow rates greater than 200 liters/min or at least 1.0 meter apart for samplers having flow rates less than 200 liters/min to preclude airflow interference, unless a waiver has been granted by the Regional Administrator pursuant to paragraph 3.3.4.2(c) of appendix A of part 58. For PM_{2.5}, collocated monitor inlet heights should be within 1.0 meter of each other vertically.

⁸ All distances listed are expressed as having 2 significant figures. When rounding is performed to assess compliance with these siting requirements, the distance measurements will be rounded such as to retain at least two significant figures.

⁹ See section 1.2 of appendix D for definitions of monitoring scales.

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Table E-6 to Section 3.8 of Appendix E—Summary of Monitoring Path Siting Criteria

Pollutant	Maximum monitoring path length^{9 10}	Height from ground to 80% of monitoring path¹⁸ (meters)	Horizontal or vertical distance from supporting structures² to 90% of	Distance from trees to 90% of monitoring path¹⁸ (meters)	Distance from roadways to monitoring path¹⁸ (meters)
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			monitoring path ¹⁸ (meters)		
SO ₂ ^{3 4 5 6}	<= 300 m for Middle <= 1.0 km for Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	N/A.
CO ^{4 5 7}	<= 300 m for Micro [downtown or street canyon sites]	2.5-3.5	≥1.0	≥10	2.0-10 for downtown areas or street canyon microscale.
CO ^{4 5 7}	<= 300 m for Micro [Near-Road sites]	2.0-7.0	≥1.0	≥10	≤50 for near-road microscale.
CO ^{4 5 7}	<= 300 m for Middle	2.0-15	≥1.0	≥10	See Table E-5.
CO ^{4 5 7}	<= 1.0 km for Neighborhood	2.0-15	≥1.0	≥10	See Table E-5.
O ₃ ^{3 4 5}	<= 300 m for Middle	2.0-15	≥1.0	≥10	See Table E-4.
O ₃ ^{3 4 5}	<= 1.0 km for Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	See Table E-4.
NO ₂ ^{3 4 5}	Between 50 m-300 m for Micro (Near-Road)	2.0-7.0	≥1.0	≥10	≤50 for near-road micro-scale.
NO ₂ ^{3 4 5}	<= 300 m for Middle	2.0-15	≥1.0	≥10	See Table E-4.
NO ₂ ^{3 4 5}	<= 1.0 km for Neighborhood, Urban, and Regional	2.0-15	≥1.0	≥10	See Table E-4.
PAMS ^{3 4 5} Ozone precursors	<= 1.0 km for Neighborhood and Urban	2.0-15	≥1.0	≥10	See Table E-4.

N/A—Not applicable.

¹ Monitoring path for open path analyzers is applicable only to middle or neighborhood scale CO monitoring, middle, neighborhood, urban, and regional scale NO₂ monitoring, and all applicable scales for monitoring SO₂, O₃, and O₃ precursors.

² When the monitoring path is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

³ At least 90 percent of the monitoring path should be greater than 20 meters from the dripline of tree(s) and must be 10-meters from the dripline.

⁴ Distance from 90 percent of monitoring path to obstacle, such as a building, must be at least twice the height the obstacle protrudes above the monitoring path. Sites not meeting this criterion may be classified as microscale or middle scale (*see text*).

⁵ Must have unrestricted airflow 270 degrees around at least 90 percent of the monitoring path; 180 degrees if the monitoring path is adjacent to the side of a building or a wall for street canyon monitoring.

⁶ The monitoring path should be away from minor sources, such as furnace or incineration flues. The separation distance is dependent on the height of the minor source's emission point (such as a flue), the type of fuel or waste burned, and the quality of the fuel (sulfur, ash, or lead content). This criterion is designed to avoid undue influences from minor sources.

⁷ For microscale CO monitoring sites, the monitoring path must be ≥ 10 meters from a street intersection and preferably at a midblock location.

⁸ All distances listed are expressed as having 2 significant figures. When rounding is performed to assess compliance with these siting requirements, the distance measurements will be rounded such as to retain at least two significant figures.

⁹ See section 1.2 of appendix D for definitions of monitoring scales.

¹⁰ See section 3.7 of this appendix.

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