

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER I: AIR QUALITY STANDARDS AND EPISODES

PART 243
AIR QUALITY STANDARDS

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AUTHORITY: Implementing Sections 7.2 and 10 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/7.2, 10, and 27].

SOURCE: Adopted as Chapter 2: Air Pollution, Part III: Air Quality Standards, in R71-23, filed and effective April 14, 1972; amended in R80-11, at 6 Ill. Reg. 5804, effective April 22, 1982; amended in R82-12, at 7 Ill. Reg. 9906, effective August 18, 1983; codified at 7 Ill. Reg. 13630; amended in R91-35 at 16 Ill. Reg. 8185, effective May 15, 1992; amended in R09-19 at 35 Ill. Reg. 18857, effective October 25, 2011; amended in R13-11 at 37 Ill. Reg. 12882, effective July 29, 2013; amended in R14-6 at 37 Ill. Reg. 19848, effective November 27, 2013; amended in R14-17 at 38 Ill. Reg. 12900, effective June 9, 2014.

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Section 243.101 Definitions

For the purposes of this Part, terms listed below will have the meanings attributed to them in this Section. As used in this Part, all terms not defined in this Section will have the meaning given

them by the Act; the CAA, incorporated by reference in Section 243.108; or 35 Ill. Adm. Code 201.102.

“Act” means the Environmental Protection Act [415 ILCS 5].

“Agency” means the Illinois Environmental Protection Agency.

“Ambient air” means that portion of the atmosphere, external to buildings, to which the general public has access.

“Clean Air Act” or “CAA” means the federal Clean Air Act 42 USC 7401 et. seq, as amended, incorporated by reference in Section 243.108.

“Exceedance of a NAAQS” means one occurrence of a measured or modeled concentration that exceeds the specified concentration level of such NAAQS for the averaging period specified by the standard.

“Exceptional event” means an event that fulfills all of the following criteria:

The event affects air quality;

The event is not reasonably controllable or preventable;

The event is caused by human activity that is unlikely to recur at a particular location or a natural event; and

The event is determined by USEPA in accordance with 40 CFR 50.14 to be an exceptional event.

An “exceptional event” does not include any of the following:

Stagnation of air masses or meteorological inversions;

A meteorological event involving high temperatures or lack of precipitation; or

Air pollution relating to source noncompliance.

“Federal equivalent method” or “FEM” means a method for measuring the concentration of an air pollutant in the ambient air that USEPA has designated as an equivalent method pursuant to 40 CFR 53 and which is included in the List of Designated Methods, including later updates, as incorporated by reference in Section 243.108; the term “federal equivalent method” does not include a method for which USEPA has cancelled or superseded an equivalent method designation in accordance with 40 CFR 53.11 or 53.16, as reflected in the incorporation by reference in Section 243.108.

BOARD NOTE: Derived from 40 CFR 50.1(f) (definition of “equivalent method”), 50.11(d)(2) (parenthetical definition of “FEM”), and 53.1 (definition of “federal equivalent method”). The clause “including later updates” in this definition is intended to exclude methods canceled by USEPA pursuant to 40 CFR 53.11 or 53.16 for which the

cancellation is included in the updates to List of Designated Methods incorporated by reference in Section 243.108. A federal designation of an FEM becomes effective upon publication of a notice in the Federal Register. A federal cancellation of an FEM becomes effective upon deletion from the listing of FEMs.

“Federal reference method” or “FRM” means a method of sampling and analyzing the ambient air for an air pollutant that USEPA has specified as a reference method in an appendix to 40 CFR 50, incorporated by reference in Section 243.108, or a method that USEPA has designated as a reference method pursuant to 40 CFR 53 and which is included in List of Designated Methods, including later updates, incorporated by reference in Section 243.108; the term “federal reference method” does not include a method for which USEPA has cancelled or superseded a reference method designation in accordance with 40 CFR 53.11 or 53.16, as reflected in the incorporation by reference in Section 243.108.

BOARD NOTE: Derived from 40 CFR 50.1(f) (definition of “reference method”) and 53.1 (definition of “federal reference method”). The clause “including later updates” in this definition is intended to include methods canceled by USEPA pursuant to 40 CFR 53.11 or 53.16 for which the cancellation is included in the updates to List of Designated Methods incorporated by reference in Section 243.108. A federal designation of an FRM becomes effective upon publication of a notice in the Federal Register. A federal cancellation of an FRM becomes effective upon deletion from the listing of FRMs or from an appendix to 40 CFR 50.

“Micrograms per cubic meter” or “ $\mu\text{g}/\text{m}^3$ ” means one millionth (10^{-6}) of a gram of a contaminant per cubic meter of ambient air, as measured and determined by the methods prescribed for that contaminant.

BOARD NOTE: The Board added this definition and that for “milligrams per liter” (immediately below).

“Milligrams per cubic meter” or “ mg/m^3 ” means one thousandth (10^{-3}) of a gram of a contaminant per cubic meter of ambient air, as measured and determined by the methods prescribed for that contaminant.

“National Ambient Air Quality Standard” or “NAAQS” means a standard established by USEPA that applies for outdoor air throughout the United States.

BOARD NOTE: The Board added this definition, derived from the definition in “Terms of Environment: Glossary, Abbreviations, and Acronyms” (December 1997), EPA 175-B-97-001, at p. 30. USEPA has codified the NAAQS at 40 CFR 50.

BOARD NOTE: The Board added this definition based on the definition in “Terms of Environment: Glossary, Abbreviations, and Acronyms” (December 1997), document number EPA 175-B-97-001, USEPA, Office of Communications, Education, and Public Affairs, at p. 30.

“Natural event” means an event in which human activity plays little or no direct causal role.

“Parts per billion” or “ppb” means the ratio of the parts of a specified contaminant to a billion parts of air by weight ($1:10^9$), as measured and determined by the methods prescribed for that contaminant.

BOARD NOTE: The Board added this definition and that for “parts per million,” derived from the parentheticals in 40 CFR 50.4(a) and (b) and 50.17(a) and the definition

of “parts per billion (ppb)/parts per million (ppm)” in “Terms of Environment: Glossary, Abbreviations, and Acronyms” (December 1997), EPA 175-B-97-001, at p. 34.

“Parts per million” or “ppm” means the ratio of the parts of a specified contaminant to a million parts of air by weight ($1:10^{-6}$), as measured and determined by the methods prescribed for that contaminant.

BOARD NOTE: The Board added this definition, derived from the parentheticals in 40 CFR 50.4(a) and (b) and 50.17(a) and the definition of “parts per billion (ppb)/parts per million (ppm)” in “Terms of Environment: Glossary, Abbreviations, and Acronyms” (December 1997), EPA 175-B-97-001, at p. 34.

“PM₁₀” means particulate matter that has an aerodynamic diameter less than or equal to a nominal 10 micrometers (μm).

BOARD NOTE: The Board added this definition, derived from the parenthetical definition in 40 CFR 50.6(c).

“PM_{2.5}” means particulate matter that has an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (μm).

BOARD NOTE: The Board added this definition, derived from the parenthetical definition in 40 CFR 50.7(a).

“Traceable” means that a local standard has been compared and certified either directly or via not more than one intermediate standard, to a primary standard, such as a National Bureau of Standards Standard Reference Material (NBS SRM), or a USEPA/NBS-approved Certified Reference Material (CRM).

“USEPA” means the United States Environmental Protection Agency.

BOARD NOTE: Derived from 40 CFR 50.1(c). The Board has used “USEPA” in text where USEPA has used “Administrator,” where action by USEPA is clearly contemplated. Otherwise, the Board has retained the term “Agency” as defined in this Section.

BOARD NOTE: Derived from 40 CFR 50.1 (2012), except as otherwise more specifically indicated.

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.102 Scope

- a) This Part sets forth the NAAQS adopted by USEPA under section 109 of the CAA (42 USC 7409) and incorporated into this Part pursuant to 415 ILCS 5/7.2 and 10(H).
- b) National primary ambient air quality standards (primary NAAQS) define levels of air quality that USEPA has judged are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards (secondary NAAQS) define levels of air quality that USEPA has judged necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. These standards are subject to revision, and additional primary and secondary NAAQS may be promulgated as USEPA deems necessary to protect the public health and welfare.

- c) The promulgation of primary and secondary NAAQS must not be considered in any manner to allow significant deterioration of existing air quality in any portion of this State.

BOARD NOTE: Derived from 40 CFR 50.2 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.103 Applicability

The standards in this Part apply throughout the State of Illinois, except as otherwise provided in this Part.

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.104 Nondegradation

Existing ambient air quality that is better than the established ambient air quality standards at the date of their adoption will be maintained in its present high quality. Such ambient air quality shall not be lowered unless and until it is proved to the Illinois Environmental Protection Agency (Agency) that the change is justifiable as a result of necessary economic and social development and will not interfere with or become injurious to human health or welfare.

(Source: Amended at 35 Ill. Reg. 18857, effective October 25, 2011).

Section 243.105 Air Quality Monitoring Data Influenced by Exceptional Events

- a) Requirements.
- 1) The Agency may request USEPA to exclude from use in determinations data showing an exceedance of an NAAQS that is directly due to an exceptional event. The Agency must demonstrate to USEPA that the event caused a specific air pollution concentration at a particular air quality monitoring location.
 - 2) A demonstration to justify data exclusion may include any reliable and accurate data, but must demonstrate a clear causal relationship between the measured exceedance of an NAAQS and the event in accordance with subsection (c)(3)(D) of this Section.
- b) Determinations by USEPA. USEPA has stated the criteria for making a determination to exclude data as follow:
- 1) Exceptional Events. USEPA has stated that it will exclude data from use in determinations of exceedance of an NAAQS where the Agency has demonstrated that an exceptional event caused a specific air pollution concentration in excess of one or more NAAQS at a particular air quality monitoring location, and the Agency otherwise satisfies the requirements of 40 CFR 50.14.

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- 2) Fireworks Displays. USEPA has stated that it will exclude data from use in determinations of exceedance of an NAAQS where the Agency has demonstrated that emissions from fireworks displays caused a specific air pollution concentration in excess of one or more NAAQS at a particular air quality monitoring location, and the State otherwise satisfies the requirements of 40 CFR 50.14. USEPA has stated that these data will be treated in the same manner as exceptional events under this Section, provided the Agency has demonstrated that the use of fireworks is significantly integral to traditional national, ethnic, or other cultural events, including, but not limited to July Fourth celebrations, which satisfy the requirements of 40 CFR 50.14.
- 3) Prescribed Fires. USEPA has stated that it will exclude data from use in determinations of exceedance of an NAAQS where the Agency has demonstrated that emissions from prescribed fires caused a specific air pollution concentration in excess of one or more NAAQS at a particular air quality monitoring location, and the Agency otherwise satisfies the requirements of 40 CFR 50.14, provided that the emissions are from prescribed fires that USEPA determines meets the definition of “exceptional event” in Section 243.101, and provided that the Agency has certified to USEPA that the State has adopted and is implementing a Smoke Management Program (SMP) or the State has ensured that the burner employed basic smoke management practices. If an exceptional event occurs using the basic smoke management practices approach, the Agency must undertake a review of the State’s approach to ensure public health is being protected and must include consideration of development of an SMP.

BOARD NOTE: In each of corresponding 40 CFR 50.14(b)(1), (b)(2), and (b)(3), USEPA stated “EPA shall exclude data from use in determinations of exceedances and NAAQS violations.” In the first person, “shall” is used more to express present intent or to commit to future action. The Board has changed “EPA shall” to “USEPA has stated that it will.” Further, the Board has relied on the defined term “exceedance of an NAAQS.”

c) Schedules and Procedures.

- 1) Public notification. The Agency or, where the Agency has delegated authority pursuant to Section 4(g) or (r) of the Act, the Agency’s delegatee, must notify the public promptly whenever an event occurs or is reasonably anticipated to occur that may result in the exceedance of an NAAQS.
- 2) Flagging of Data.
 - A) The Agency must notify USEPA of the State’s intent to exclude one or more measured exceedances of an NAAQS as being due to an exceptional event by placing a flag in the appropriate field for the data record of concern that has been submitted to the federal air quality system (AQS) database.
 - B) Flags placed on data in accordance with this Section must be deemed informational only, and the data must not be excluded from determinations

with respect to an exceedance of an NAAQS unless and until USEPA notifies the Agency of USEPA concurrence following the Agency's submittal of a demonstration pursuant to subsection (c)(3) of this Section by placing a concurrence flag in the appropriate field for the data record in the AQS database.

- C) Flags placed on data as being due to an exceptional event, together with an initial description of the event, must be submitted to USEPA not later than July 1 of the calendar year following the year in which the flagged measurement occurred, except as allowed under subsection (c)(2)(D) or (c)(2)(E) of this Section.
 - D) This subsection (c)(2)(D) corresponds with 40 CFR 50.14(c)(2)(iv), which has expired by its own terms. This statement maintains structural consistency with the federal regulations.
 - E) This subsection (c)(2)(E) corresponds with 40 CFR 50.14(c)(2)(v), which has expired by its own terms. This statement maintains structural consistency with the federal regulations.
 - F) USEPA has stated that when USEPA sets a NAAQS for a new pollutant or revises the NAAQS for an existing pollutant, USEPA may revise or set a new schedule for flagging exceptional event data, providing initial data descriptions, and providing detailed data documentation in AQS for the initial designations of areas for those NAAQS. Table A for this Part provides the existing schedule for submission of flags with initial descriptions in AQS and detailed documentation. These schedules apply for those data that will or may influence the initial designation of areas for those NAAQS. USEPA has stated that it will revise the table upon which Table A is based as necessary to accommodate revised data submission schedules for new or revised NAAQS.
- 3) Submission of demonstrations.
- A) When the Agency has flagged data as being due to an exceptional event and is requesting exclusion of the affected measurement data, the Agency must, after notice and opportunity for public comment, submit a demonstration to USEPA to justify data exclusion not later than the sooner of three years following the end of the calendar quarter in which the flagged concentration was recorded or 12 months prior to the date that a regulatory decision must be made by USEPA. The Agency must submit to USEPA the public comments it received, along with its demonstration.
 - B) This subsection (c)(3)(B) corresponds with 40 CFR 50.14(b)(3)(ii), which pertains only to a reporting period and opportunity to demonstrate exceptions that has passed. This statement maintains structural consistency with the federal regulations.

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- C) This subsection (c)(3)(B) corresponds with 40 CFR 50.14(b)(3)(ii), which pertains only to a reporting period and opportunity to demonstrate exceptional events that has passed in a provision that has expired by its own terms. This statement maintains structural consistency with the federal regulations.
- D) The demonstration to justify data exclusion must provide the following evidence:
- i) That the event satisfies the definition of “exceptional event” set forth in Section 243.101;
 - ii) That there is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area;
 - iii) That the event is associated with a measured concentration in excess of normal historical fluctuations, including background; and
 - iv) That there would have been no exceedance or violation but for the event.
- E) With the submission of the demonstration, the Agency must document that the public comment process was followed.

BOARD NOTE: Derived from 40 CFR 50.14 (2012).

(Source: Added at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.106 Monitoring

Pollution levels will be determined by fixed or mobile sampling stations beyond the premises on which a source is located. Stations will be located according to the guidelines for established monitoring networks as developed by the United States Environmental Protection Agency.

Section 243.107 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 Section 243.120(b), (c), and (d) and lead standards contained in Section 243.126(b), are corrected to a reference temperature of 25° C, and to a reference pressure of 760 millimeters of mercury (1013.2 millibars). Measurements of PM_{2.5}, for purposes of comparison to the standards contained in Section 243.120(b), (c), and (d), and lead, for purposes of comparison to the standards contained in Section 243.126(b), must be reported based upon the actual ambient air volume measured at the actual temperature and pressure at the monitoring site during the measurement period.

BOARD NOTE: Derived from 40 CFR 50.3 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.108 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions:

Government Printing Office (GPO), 732 Capitol Street NW, Washington, DC 20401 (telephone: 202-512-1800 or 866-512-1800; website: www.gpo.gov). The following documents incorporated by reference are available from this source:

Appendix A-1 to 40 CFR 50 (2013) (Reference Measurement Principle and Calibration Procedure for the Measurement of Sulfur Dioxide in the Atmosphere (Ultraviolet Fluorescence Method)), referenced in Section 243.122.

Appendix A-2 to 40 CFR 50 (2013) (Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method)), referenced in Section 243.122.

Appendix B to 40 CFR 50 (2013) (Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere (High- Volume Method)), referenced in appendix G to 40 CFR 50 (see below).

Appendix C to 40 CFR 50 (2013) (Reference Measurement Principle and Calibration Procedure for the Measurement of Carbon Monoxide in the Atmosphere (Non-Dispersive Infrared Photometry)), referenced in Section 243.123.

Appendix D to 40 CFR 50 (2013) (Reference Measurement Principle and Calibration Procedure for the Measurement of Ozone in the Atmosphere), referenced in Section 243.125.

Appendix F to 40 CFR 50 (2013) (Reference Measurement Principle and Calibration Procedure for the Measurement of Nitrogen Dioxide in the Atmosphere (Gas Phase Chemiluminescence)), referenced in Section 243.124.

Appendix G to 40 CFR 50 (2013), as amended at 78 Fed. Reg. 40000 (July 3, 2013) (Reference Method for the Determination of Lead in Suspended Particulate Matter Collected from Ambient Air), referenced in Section 243.126.

Appendix H to 40 CFR 50 (2013) (Interpretation of the 1-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Appendix I to 40 CFR 50 (2013) (Interpretation of the 8-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Appendix J to 40 CFR 50 (2013) (Reference Method for the Determination of Particulate Matter as PM₁₀ in the Atmosphere), referenced in Section 243.120.

Appendix K to 40 CFR 50 (2013) (Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Particulate Matter), referenced in Section 243.120.

Appendix L to 40 CFR 50 (2013) (Reference Method for the Determination of Fine Particulate Matter as PM_{2.5} in the Atmosphere), referenced in Section 243.120.

Appendix N to 40 CFR 50 (2013), as amended at 78 Fed. Reg. 47191 (August 5, 2013) (Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Particulate Matter), referenced in Section 243.120.

Appendix O to 40 CFR 50 (2013) (Reference Method for the Determination of Coarse Particulate Matter as PM_{10-2.5} in the Atmosphere), referenced in appendix Q to 40 CFR 50 and for use in federally required monitoring by the NCore system pursuant to 40 CFR 58.

Appendix P to 40 CFR 50 (2013) (Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Appendix Q to 40 CFR 50 (2013) (Reference Method for the Determination of Lead in Particulate Matter as PM₁₀ Collected from Ambient Air), referenced in appendix R to 40 CFR 50.

Appendix R to 40 CFR 50 (2013) (Interpretation of the National Ambient Air Quality Standards for Lead), referenced in Section 243.126.

Appendix S to 40 CFR 50 (2013) (Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Nitrogen (Nitrogen Dioxide)), referenced in Section 243.124.

Appendix T to 40 CFR 50 (2013) (Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Sulfur (Sulfur Dioxide)), referenced in Section 243.122.

Clean Air Act, 42 USC 7401 et seq. (2011) (for definitions of terms only), referenced in Section 243.102.

BOARD NOTE: Segments of the Code of Federal Regulations and the United States Code are available for free download as PDF documents from the GPO FDsys website: <http://www.gpo.gov/fdsys/>.

USEPA, National Exposure Research Laboratory, Human Exposure & Atmospheric Sciences Division (MD-D205-03), Research Triangle Park, NC 27711. The following documents incorporated by reference are available from this source:

"List of Designated Reference and Equivalent Methods" (December 17, 2013) (referred to as the "List of Designated Methods" and referenced in Sections 243.101, 243.120, 243.122, 243.123, 243.124, 243.125, and 243.126.

This incorporation by reference does not include USEPA methods approvals that occurred after December 17, 2013.

BOARD NOTE: The List of Designated Methods is available for free download as a PDF document from the USEPA, Technology Transfer, Ambient Monitoring Technology Information Center website: <http://www.epa.gov/ttn/amtic/criteria.html>.

(Source: Amended at 38 Ill. Reg. 12900, effective June 9, 2014)

SUBPART B: STANDARDS AND MEASUREMENT METHODS

Section 243.120 PM₁₀ and PM_{2.5}

- a) 1987 Primary and Secondary 24-Hour NAAQS for PM₁₀.
- 1) The level of the 1987 primary and secondary 24-hour NAAQS for PM₁₀ is 150 µg/m³, 24-hour average concentration. The 1987 primary and secondary NAAQS for PM₁₀ is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³, as determined in accordance with appendix K to 40 CFR 50, incorporated by reference in Section 243.108, is equal to or less than one.
 - 2) This subsection (a)(2) corresponds with 40 CFR 51.6(b), a provision marked "reserved" by USEPA. This statement maintains structural consistency with the corresponding federal regulation.
 - 3) For the purpose of determining attainment of the 1987 primary and secondary 24-hour NAAQS for PM₁₀, particulate matter must be measured in the ambient air as PM₁₀ by a method that fulfills either of the following requirements:
 - A) An FRM based on appendix J to 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108; or
 - B) An FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.6 (2013). USEPA adopted 1997 primary NAAQS for PM₁₀ at 62 Fed. Reg. 38652 (July 18, 1997). As a result of a judicial vacatur, USEPA later removed the transitional provision relative to the 1987 NAAQS at 65 Fed. Reg. 80776 (Dec. 22, 2000) and the 1997 NAAQS at 69 Fed. Reg. 45595 (July 30, 2004). Thus, the 1987 primary and secondary NAAQS for PM₁₀ are included in this subsection (a).

- b) 1997 Primary and Secondary Annual Average and 24-Hour NAAQS for PM_{2.5}.
- 1) The 1997 primary and secondary annual average NAAQS for PM_{2.5} is 15.0 µg/m³, annual arithmetic mean concentration, and the 1997 primary and secondary 24-hour NAAQS for PM_{2.5} is 65 µg/m³, 24-hour average concentration, measured in the ambient air as PM_{2.5} by a method that fulfills either of the following requirements:
 - A) An FRM based on appendix L of 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108; or

- B) An FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
- 2) The 1997 primary and secondary annual average NAAQS for PM_{2.5} is met when the annual arithmetic mean concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 15.0 µg/m³.
- 3) The 1997 primary and secondary 24-hour NAAQS for PM_{2.5} is met when the 98th percentile 24- hour concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 65 µg/m³.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.7 (2013). The 2006 primary and secondary annual average and 24-hour NAAQS for PM_{2.5} differs from the 1997 standards in that the 24- hour average concentration required by the 2006 standard is substantially lower (more stringent) than that for the 1997 standard. The Board has retained the 1997 standard in this subsection (b) because USEPA has retained the 1997 standard in 40 CFR 50.6.

- c) 2006 Primary and Secondary Annual Average and 24-Hour NAAQS for PM_{2.5}.
 - 1) The 2006 primary and secondary annual average NAAQS for PM_{2.5} is 15.0 µg/m³, annual arithmetic mean concentration, and the 2006 primary and secondary 24-hour NAAQS for PM_{2.5} is 35 µg/m³, 24-hour average concentration, measured in the ambient air as PM_{2.5} by a method that fulfills either of the following requirements:
 - A) An FRM based on appendix L of 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108; or
 - B) An FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
 - 2) The 2006 primary and secondary annual average NAAQS for PM_{2.5} is met when the annual arithmetic mean concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 15.0 µg/m³.
 - 3) The 2006 primary and secondary 24-hour NAAQS for PM_{2.5} is met when the 98th percentile 24- hour concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 35 µg/m³.

BOARD NOTE: This subsection (c) is derived from 40 CFR 50.13 (2013)(2012)

- d) 2012 Primary Annual Average and 24-Hour NAAQS for PM_{2.5}

- 1) The 2012 primary annual average NAAQS for PM_{2.5} is 12.0 µg/m³ annual arithmetic mean concentration, and the 2012 primary 24-hour NAAQS for PM_{2.5} is 35 µg/m³ 24-hour average concentration, measured in the ambient air as PM_{2.5} by a method that fulfills either of the following requirements:
 - A) An FRM based on appendix L of 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108; or
 - B) An FEM designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108.
- 2) The 2012 primary annual NAAQS for PM_{2.5} is met when the annual arithmetic mean concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 12.0 µg/m³.
- 3) The 2012 primary 24-hour NAAQS for PM_{2.5} is met when the 98th percentile 24-hour concentration, as determined in accordance with appendix N of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to 35 µg/m³.

BOARD NOTE: This subsection (d) is derived from 40 CFR 50.13 (2013).

(Source: Amended at 37 Ill. Reg. 19848, effective November 27, 2013)

Section 243.122 Sulfur Oxides (Sulfur Dioxide)

- a) 1971 Primary Annual Average and 24-Hour NAAQS for Sulfur Oxides (as Sulfur Dioxide (SO₂)).
 - 1) The level of the 1971 primary annual average NAAQS for sulfur oxides is 0.030 ppm, not to be exceeded in a calendar year. The annual arithmetic mean must be rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm must be rounded up).
 - 2) The level of the 1971 primary 24-hour NAAQS for sulfur oxides is 0.14 ppm, not to be exceeded more than once per calendar year. The 24-hour averages must be determined from successive non-overlapping 24-hour blocks starting at midnight each calendar day and must be rounded to two decimal places (fractional parts equal to or greater than 0.005 ppm must be rounded up).
 - 3) Sulfur oxides must be measured in the ambient air as SO₂ by the FRM described in appendix A-2 to 40 CFR 50, incorporated by reference in Section 243.108, or by an FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
 - 4) To demonstrate attainment, the annual arithmetic mean and the second-highest 24-hour averages must be based upon hourly data that are at least 75 percent complete in each calendar quarter. A 24-hour block average must be considered

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valid if at least 75 percent of the hourly averages for the 24-hour period are available. In the event that only 18-, 19-, 20-, 21-, 22-, or 23-hour averages are available, the 24-hour block average must be computed as the sum of the available hourly averages using the number of hours (i.e., 18, 19, etc.) as the divisor. If less than 18-hour averages are available, but the 24-hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of subsection (b) of this Section, this must be considered a valid 24-hour average. In this case, the 24-hour block average must be computed as the sum of the available hourly averages divided by 24.

- 5) The 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) remains applicable to all areas notwithstanding the promulgation of the 2010 primary one-hour NAAQS for sulfur oxides in subsection (c) of this Section. The Board will delete the 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) after fulfillment of the conditions recited by USEPA in corresponding 40 CFR 50.4(e).

BOARD NOTE: Corresponding 40 CFR 50.4(e) recites that the 1971 primary NAAQS for an implementation plan for attainment with the 2010 primary one-hour NAAQS for sulfur oxides. The first type of area is one that USEPA had designated as non-attainment for that standard as of the effective date of the 2010 primary one-hour NAAQS for the 1971 primary NAAQS for sulfur oxides as of the effective date of the 2010 NAAQS. That date was August 23, 2010. See 75 Fed. Reg. 35520 (June 22, 2010). As of that date, USEPA had not designated any area in Illinois as non-attainment. See 40 CFR 81.314 (2010). The Board is unaware of any USEPA SIP call for any area of Illinois relative to the 1971 primary NAAQS for sulfur oxides. USEPA designated the attainment status of two areas in Illinois for the 2010 primary one-hour NAAQS for sulfur oxides on August 5, 2013, effective October 4, 2013. See 40 CFR 81.314 (2013), as amended at 78 Fed. Reg. 47191 (Aug. 5, 2013) (Lemont and Pekin areas). The 1971 primary annual average and 24-hour NAAQS for sulfur oxides will no longer apply to those two designated areas effective October 4, 2014; although the NAAQS will continue to apply to all other areas of Illinois after that date. When the conditions of this subsection (a)(5) have been fulfilled as to all areas of Illinois, or USEPA has removed 40 CFR 50.4, the Board will remove the standard of this subsection (a) as obsolete.

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.4.

- b) 1971 Secondary Three-Hour NAAQS for Sulfur Oxides (as SO₂).
 - 1) The level of the 1971 secondary three-hour NAAQS for sulfur oxides is 0.5 ppm, not to be exceeded more than once per calendar year. The three-hour averages must be determined from successive non-overlapping three-hour blocks starting at midnight each calendar day and must be rounded to one decimal place (fractional parts equal to or greater than 0.05 ppm must be rounded up).
 - 2) Sulfur oxides must be measured in the ambient air as SO₂ by the FRM described in appendix A-2 to 40 CFR 50, incorporated by reference in Section 243.108, or

by an FEM designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108.

- 3) To demonstrate attainment, the second-highest three-hour average must be based upon hourly data that are at least 75 percent complete in each calendar quarter. A three-hour block average must be considered valid only if all three hourly averages for the three-hour period are available. If only one or two hourly averages are available, but the three-hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of subsection (b)(1) of this Section, this must be considered a valid three-hour average. In all cases, the three-hour block average must be computed as the sum of the hourly averages divided by three.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.5.

- c) 2010 Primary One-Hour NAAQS for Sulfur Oxides (as SO₂).

- 1) The level of the 2010 primary one-hour NAAQS for sulfur oxides is 75 ppb, measured in the ambient air as SO₂.
- 2) The 2010 one-hour primary NAAQS for sulfur oxides is met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) of the daily maximum one-hour average concentrations is less than or equal to 75 ppb, as determined in accordance with appendix T of 40 CFR 50, incorporated by reference in Section 243.108.
- 3) The level of the 2010 one-hour primary NAAQS for sulfur oxides must be measured by an FRM based on appendix A-1 or A-2 of 40 CFR 50, incorporated by reference in Section 243.108, or by an FEM designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108.

BOARD NOTE: This subsection (c) is derived from 40 CFR 50.17. The 1971 primary NAAQS for SO₂ remains in effect until the federal conditions of 40 CFR 50.4(e) have been fulfilled, as outlined in subsection (a)(5) of this Section and the appended Board note.

(Source: Amended at 37 Ill. Reg. 19848, effective November 27, 2013)

Section 243.123 Carbon Monoxide

- a) The 1971 eight-hour and one-hour primary NAAQS for carbon monoxide are as follows:
 - 1) An eight-hour average concentration of 9 ppm (10 mg/m³), not to be exceeded more than once per year; and
 - 2) A one-hour average concentration of 35 ppm (40 mg/m³), not to be exceeded more than once per year.
- b) The levels of carbon monoxide in the ambient air must be measured by a method that fulfills either of the following requirements:

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- 1) An FRM based on appendix C of 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108; or
 - 2) An FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
- c) An eight-hour average concentration must be considered valid if at least 75 percent of the hourly average for the eight-hour period is available. In the event that only six-hour (or seven-hour) averages are available, the eight-hour average must be computed on the basis of the hours available using six (or seven) as the divisor.
- d) When summarizing data for comparison with the standards, averages must be stated to one decimal place. Comparison of the data with the levels of the standards in ppm must be made in terms of integers with fractional parts of 0.5 or greater rounded up.

BOARD NOTE: This Section is derived from 40 CFR 50.8 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.124 Nitrogen Oxides (Nitrogen Dioxide as Indicator)

- a) The level of the 1971 primary annual average NAAQS for nitrogen oxides is 53 ppb, annual average concentration, measured in the ambient air as nitrogen dioxide (NO₂).
- b) The level of the 2010 primary one-hour NAAQS for nitrogen oxides is 100 ppb, one-hour average concentration, measured in the ambient air as NO₂.
- c) The level of the 1971 secondary annual average NAAQS for nitrogen oxides is 0.053 ppm (100 µg/m³), annual arithmetic mean concentration, measured in the ambient air as NO₂.
- d) The levels of the standards in subsections (a) through (c) of this Section must be measured by:
 - 1) An FRM based on appendix F to 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108; or
 - 2) By an FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
- e) The 1971 primary annual average NAAQS for nitrogen oxides in subsection (a) of this Section is met when the annual average concentration in a calendar year is less than or equal to 53 ppb, as determined in accordance with appendix S of 40 CFR 50, incorporated by reference in Section 243.108, for the annual standard.
- f) The 2010 one-hour primary NAAQS for nitrogen oxides in subsection (b) of this Section is met when the three-year average of the annual 98th percentile of the daily maximum one-hour average concentration is less than or equal to 100 ppb, as determined in

accordance with appendix S of 40 CFR 50, incorporated by reference in Section 243.108, for the 1-hour standard.

- g) The 1971 secondary annual average NAAQS for nitrogen oxides in subsection (c) of this Section is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 ppm, rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least 75 percent complete or upon data derived from manual methods that are at least 75 percent complete for the scheduled sampling days in each calendar quarter.

BOARD NOTE: This Section is derived from 40 CFR 50.11 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.125 Ozone

- a) 1997 Primary and Secondary Eight-Hour NAAQS for Ozone.
- 1) The 1997 hour primary and secondary eight-hour NAAQS for ozone, measured by an FRM based on appendix D to 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108, is 0.08 ppm, daily maximum eight-hour average.
 - 2) The 1997 primary and secondary eight-hour NAAQS for ozone is met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum eight-hour average ozone concentration is less than or equal to 0.08 ppm, as determined in accordance with appendix I to 40 CFR 50, incorporated by reference in Section 243.108.
 - 3) USEPA has stated in corresponding 40 CFR 50.10(c) that the 1997 primary and secondary eight-hour NAAQS for ozone set forth in subsection (b)(1) of this Section will no longer apply to an area for transportation conformity purposes one year after the effective date of USEPA designation of that area pursuant to 42 USC 7407 for the 2008 primary and secondary eight-hour NAAQS set forth for ozone in subsection (c)(1) of this Section. The 1997 primary and secondary eight-hour NAAQS for ozone set forth in this subsection (b) will remain applicable to all areas for all other purposes notwithstanding the 2008 primary and secondary eight-hour NAAQS for ozone set forth in subsection (c) of this Section or the USEPA designation of areas for that 2008 primary and secondary eight-hour NAAQS for ozone.

BOARD NOTE: USEPA has codified area designations and classifications with respect to the 2008 primary and secondary NAAQS for ozone in 40 CFR 81.314. When USEPA has taken action and the conditions of subsection (b)(3) have been fulfilled, or USEPA has removed 40 CFR 50.10, the Board will remove obsolete 1997 primary and secondary one-hour or eight-hour NAAQS for ozone from this subsection (a).

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.10 (2012).

- b) 2008 Primary and Secondary Eight-Hour NAAQS for Ozone.
- 1) The 2008 primary and secondary eight-hour NAAQS for ozone is 0.075 ppm, daily maximum eight-hour average, measured by an FRM based on appendix D to 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108, or an FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
 - 2) The 2008 primary and secondary eight-hour NAAQS for ozone ambient air quality standards are met at an ambient air quality monitoring site when the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration is less than or equal to 0.075 ppm, as determined in accordance with appendix P to 40 CFR 50, incorporated by reference in Section 243.108.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.15 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.126 Lead

- a) 1978 Primary and Secondary Quarterly Average NAAQS for Lead.
- 1) The 1978 primary and secondary quarterly average NAAQS for lead and its compounds, measured as elemental lead by an FRM based on appendix G to 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108, or by an FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108, is 1.5 $\mu\text{g}/\text{m}^3$, maximum arithmetic mean averaged over a calendar quarter.
 - 2) The 1978 primary and secondary quarterly average NAAQS for lead set forth in this subsection (a) will remain applicable to all areas notwithstanding the 2008 primary and secondary quarterly average NAAQS for lead in subsection (b) of this Section. The 1978 primary and secondary quarterly average NAAQS for lead set forth in this subsection (a) will no longer apply to an area one year after the effective date of the designation of that area by USEPA pursuant to 42 USC 7407 for the 2008 primary and secondary three-month average NAAQS for lead set forth in subsection (b) of this Section; except that for areas designated nonattainment for the 1978 primary and secondary quarterly average NAAQS for lead set forth in this subsection (a) as of January 12, 2009, the 1978 primary and secondary NAAQS for lead set forth in this subsection (a) will apply until USEPA has approved an implementation plan for that area pursuant to 42 USC 7514 providing for attainment or maintenance of the 2008 primary and secondary three-month average NAAQS for lead set forth in subsection (b) of this Section.

BOARD NOTE: The Board substituted "January 12, 2009" for the open-ended language in corresponding 40 CFR 50.12(b) relative to the effective date of 40

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CFR 50.16. January 12, 2009 is the effective date recited at 73 Fed. Reg. 66964 (Nov. 12, 2008). USEPA designated Granite City as nonattainment with the 2008 primary and secondary three-month average NAAQS for lead in 2010 and an area of Chicago in 2011. USEPA designated all other areas of Illinois for the 2008 primary and secondary three-month average NAAQS for lead in 2012. See 40 CFR 81.314 (area designations in Illinois); 76 Fed. Reg. 72097, 108 (Nov. 22, 2011) (effective December 31, 2011); 75 Fed. Reg. 71033, 42 (Nov. 22, 2010) (effective December 31, 2010). Thus, this subsection (a) has been obsolete since December 31, 2012.

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.12 (2012).

- b) 2008 Primary and Secondary Three-Month Average NAAQS for Lead.
- 1) The 2008 primary and secondary three-month average NAAQS for lead and its compounds is $0.15 \mu\text{g}/\text{m}^3$, arithmetic mean concentration over a three-month period, measured in the ambient air as lead by either of the following:
 - A) An FRM based on appendix G of 40 CFR 50, incorporated by reference in Section 243.108, and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108 or;
 - B) An FEM designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.
 - 2) The 2008 primary and secondary three-month average NAAQS for lead are met when the maximum arithmetic three-month mean concentration for a three-year period, as determined in accordance with appendix R of 40 CFR 50, incorporated by reference in Section 243.108, is less than or equal to $0.15 \mu\text{g}/\text{m}^3$.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.16 (2012).

(Source: Amended at 37 Ill. Reg. 12882, effective July 29, 2013)

Section 243.TABLE A Schedule of Exceptional Event Flagging and Documentation Submission for New or Revised NAAQS

NAAQS (Level) Regulatory Citations	Air quality data collected for calendar year	Event flagging & initial description deadline	Detailed documentation submission deadline
2006 24-hour PM _{2.5} ($35 \mu\text{g}/\text{m}^3$) Section 243.120(c)(1) 40 CFR 50.13(a) 71 Fed. Reg. 61144 (Oct. 17, 2006)	2004-2006	October 1, 2007	April 15, 2008

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2008 eight-hour ozone (0.075 ppm) Section 243.125(c)(1) 40 CFR 50.15(a) 73 Fed. Reg. 16436 (Mar. 27, 2008)	2005-2007 2008 2009	June 18, 2009 June 18, 2009 60 days after the end of the calendar quarter in which the event occurred or February 5, 2010, whichever date occurred first	June 18, 2009 June 18, 2009 60 days after the end of the calendar quarter in which the event occurred or February 5, 2010, whichever date occurred first
2010 one-hour nitrogen oxides (as NO ₂) (100 ppb) Section 243.124(b) 40 CFR 50.11(b) 75 Fed. Reg. 6474 (Feb. 9, 2010)	2008 2009 2010	July 1, 2010 July 1, 2010 April 1, 2011	January 22, 2011 January 22, 2011 July 1, 2010
2010 one-hour sulfur oxides (as SO ₂) (75 ppb) Section 243.122(c)(1) 40 CFR 17(a) 75 Fed. Reg. 35520 (June 22, 2010)	2008 2009 2010 2011	October 1, 2010 October 1, 2010 June 1, 2011 60 days after the end of the calendar quarter in which the event occurred or March 31, 2012, whichever date occurred first	June 1, 2011 June 1, 2011 June 1, 2011 60 days after the end of the calendar quarter in which the event occurred or March 31, 2012, whichever date occurred first

BOARD NOTE: Derived from table 1 to 40 CFR 50.14(c). USEPA noted that the information in this table of revised deadlines only applies to data that USEPA will use to establish the initial area designations for new or revised NAAQS. USEPA stated that the general schedule in this table applies for all other purposes, most notably, for data that USEPA will use for redesignations to attainment. Corresponding table 1 to 40 CFR 50.14(c)(2) includes a footnote "a" which indicates that the tabulated deadlines for event flagging and initial description for 2012 and 2013 data under the 2012 primary annual average NAAQS for PM_{2.5} are the same as those prescribed by 40 CFR 50.14 (corresponding with Section 243.105). The Board omitted those footnotes as unnecessary in the Illinois rules. Corresponding federal table 1 states that the 2012 primary annual average NAAQS for PM_{2.5} was "Promulgated December 14, 2012". Although the Administrator of USEPA signed adopted rule on that date, publication did not occur until January 15, 2013. See 78 Fed. Reg. 3086, 3276 (Jan. 15, 2013). The Board has used the Federal Register citation and date.

(Source: Amended at 37 Ill. Reg. 19848, effective November 27, 2013)