

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.

SUBPART A: GENERAL PROVISIONS

**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 that NAAQS for the averaging period specified by the standard.

“Exceptional event” means an event and its resulting emissions that fulfills all of the following criteria:

The event affects air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;

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:

Air pollution relating to source noncompliance;

Stagnation of air masses and meteorological inversions;

A meteorological event involving high temperatures or lack of precipitation (i.e., severe, extreme or exceptional drought).

BOARD NOTE: Stagnation of air masses, meteorological inversions, and meteorological events involving high temperatures or lack of precipitation do not directly cause pollutant emissions and are not exceptional events. However, conditions involving high temperatures or lack of precipitation may promote occurrences of particular types of exceptional events, such as wildfires or high wind events, which do directly cause emissions.

“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 land manager” means the Secretary of the department with authority over the federal Class I area (or the Secretary’s designee).

BOARD NOTE: *See* 40 CFR 50.1(r) and 51.301 (2016) (definitions of “federal land manager”). There are no federal Class I areas in or immediately abutting Illinois. *See* subpart D of 40 CFR 81 (2016).

“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.

“High wind dust event” is an event that includes the high-speed wind and the dust that the wind entrains and transports to a monitoring site.

“High wind threshold” is the minimum wind speed capable of causing particulate matter emissions from natural undisturbed lands in the area affected by a high wind dust event.

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“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”.

“Milligrams per cubic meter” or “ $\text{mg}/\text{m}^3$ ” 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 and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of this definition, anthropogenic sources that are reasonably controlled are not human activity that plays a direct causal role in causing emissions.

“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.

“PM<sub>10</sub>” means particulate matter that has an aerodynamic diameter less than or equal to a nominal 10 micrometers ( $\mu\text{m}$ ).

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

“PM<sub>2.5</sub>” 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).

“Prescribed fire” is any fire intentionally ignited by management actions in accordance with applicable laws, policies, and regulations to meet specific land or resource management objectives.

“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.

“Wildfire” is any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event.

“Wildland” means an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

BOARD NOTE: Derived from 40 CFR 50.1 (2016), except as otherwise more specifically indicated.

(Source: Amended at 41 Ill. Reg. 13413, effective October 23, 2017)

### **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) The federal regulations at 40 CFR 50.14 provide that a state, federal land manager, or federal agency can seek USEPA determination that exceedances or violations of an NAAQS are directly due to an exceptional event, so that the State can exclude affected ambient air quality monitoring data from a compliance determination. An exceptional event is a natural event or the result of human activity that is unlikely to recur and which is not reasonably controllable or preventable that meets specified criteria. The federal rule provides that a fireworks display, a prescribed fire, a wildfire, a high wind dust event, a stratospheric intrusion, or an aggregate of events on the same day can be an exceptional event.
- b) The Agency must use the applicable procedures of 40 CFR 50.14 to obtain a USEPA determination of an exceptional event and exclusion of affected ambient air quality monitoring data if the Agency determines that the data are influenced by an exceptional event and should be excluded from a compliance determination.
- c) Ambient air quality monitoring data excluded by a USEPA determination pursuant to 40 CFR 50.14 is excluded from use for compliance determination under this Part.

BOARD NOTE: Derived from 40 CFR 50.14 (2016).

(Source: Amended at 41 Ill. Reg. 13413, effective October 23, 2017)

### **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<sub>2.5</sub>) 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<sub>2.5</sub>, 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](http://www.gpo.gov)). The following documents incorporated by reference are available from this source:

Appendix A-1 to 40 CFR 50 (2018) (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 (2018) (Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method)), referenced in Section 243.122.

Appendix B to 40 CFR 50 (2018) (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 (2018) (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 (2018) (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 (2018) (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 (2018) (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 (2018) (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 (2018) (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 (2018) (Reference Method for the Determination of Particulate Matter as PM<sub>10</sub> in the Atmosphere), referenced in Section 243.120.

Appendix K to 40 CFR 50 (2018) (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 (2018) (Reference Method for the Determination of Fine Particulate Matter as PM<sub>2.5</sub> in the Atmosphere), referenced in Section 243.120.

Appendix N to 40 CFR 50 (2018) (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 (2018) (Reference Method for the Determination of Coarse Particulate Matter as PM<sub>10-2.5</sub> 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 (2018) (Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Appendix Q to 40 CFR 50 (2018) (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 (2018) (Interpretation of the National Ambient Air Quality Standards for Lead), referenced in Section 243.126.

Appendix S to 40 CFR 50 (2018) (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 (2018) (Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Sulfur (Sulfur Dioxide)), referenced in Section 243.122.

Appendix U to 40 CFR 50 (2018) (Interpretation of the Primary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Clean Air Act, 42 USC 7401 et seq. (2016) (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” (June 15, 2018) (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.

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 43 Ill. Reg. 3034, effective February 19, 2019)

**SUBPART B: STANDARDS AND MEASUREMENT METHODS****Section 243.120 PM<sub>10</sub> and PM<sub>2.5</sub>**

- a) 1987 Primary and Secondary 24-Hour NAAQS for PM<sub>10</sub>
- 1) The level of the 1987 primary and secondary 24-hour NAAQS for PM<sub>10</sub> is 150 µg/m<sup>3</sup>, 24-hour average concentration. The 1987 primary and secondary NAAQS for PM<sub>10</sub> is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup>, 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 50.6(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 PM<sub>10</sub>, particulate matter must be measured in the ambient air as PM<sub>10</sub> 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 List of Designated Methods, incorporated by reference in Section 243.108.

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.6. USEPA adopted 1997 primary NAAQS for PM<sub>10</sub> 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 PM<sub>10</sub> are included in this subsection (a).

- b) 1997 Primary and Secondary Annual Average and 24-Hour NAAQS for PM<sub>2.5</sub>
- 1) The 1997 primary and secondary annual average NAAQS for PM<sub>2.5</sub> is 15.0 µg/m<sup>3</sup>, annual arithmetic mean concentration, and the 1997 primary and secondary 24-hour NAAQS for PM<sub>2.5</sub> is 65 µg/m<sup>3</sup>, 24-hour average concentration, measured in the ambient air as PM<sub>2.5</sub> 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

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- 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<sub>2.5</sub> 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/m<sup>3</sup>.
- 3) The 1997 primary and secondary 24-hour NAAQS for PM<sub>2.5</sub> 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/m<sup>3</sup>.
- 4) The 1997 primary annual PM<sub>2.5</sub> NAAQS in this subsection (b) does not apply in any area of Illinois except Madison, Monroe, and St. Clair Counties and the Baldwin Village area of Randolph County. The primary NAAQS for PM<sub>2.5</sub> in this subsection (b) will no longer apply in any area of Illinois after USEPA has redesignated that area as attainment for that standard. The 1997 secondary annual NAAQS for PM<sub>2.5</sub> and the 1997 24-hour PM<sub>2.5</sub> NAAQS in this subsection (b) remain applicable.

BOARD NOTE: USEPA has codified the area designations for Illinois in 40 CFR 81.314. All areas of Illinois were designated attainment or unclassifiable/attainment except Madison, Monroe, and St. Clair Counties and the Baldwin Village area of Randolph County.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.7 and 50.13(d). The Board added the revocation clause of 40 CFR 50.13(d) as both this subsections (b)(4) and (c)(4), even though USEPA did not add the text to corresponding 40 CFR 50.7.

- c) 2006 Primary and Secondary Annual Average and 24-Hour NAAQS for PM<sub>2.5</sub>
- 1) The 2006 primary and secondary annual average NAAQS for PM<sub>2.5</sub> is 15.0 µg/m<sup>3</sup>, annual arithmetic mean concentration, and the 2006 primary and secondary 24-hour NAAQS for PM<sub>2.5</sub> is 35 µg/m<sup>3</sup>, 24-hour average concentration, measured in the ambient air as PM<sub>2.5</sub> 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<sub>2.5</sub> 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  $\mu\text{g}/\text{m}^3$ .

- 3) The 2006 primary and secondary 24-hour NAAQS for  $\text{PM}_{2.5}$  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  $\mu\text{g}/\text{m}^3$ .
- 4) The primary annual  $\text{PM}_{2.5}$  NAAQS in this subsection (c) does not apply in any area of Illinois except Madison, Monroe, and St. Clair Counties and the Baldwin Village area of Randolph County. The primary annual  $\text{PM}_{2.5}$  NAAQS in this subsection (c) will no longer apply in any area of Illinois after USEPA has redesignated that area as attainment for that standard. The secondary annual  $\text{PM}_{2.5}$  NAAQS in this subsection (c) remains applicable.

BOARD NOTE: USEPA has codified the area designations for Illinois in 40 CFR 81.314. All areas of Illinois were designated attainment or unclassifiable/attainment except Madison, Monroe, and St. Clair Counties and the Baldwin Village area of Randolph County.

BOARD NOTE: The primary and secondary annual average NAAQS for  $\text{PM}_{2.5}$  in this subsection (c) is the 1997 primary annual average NAAQS for  $\text{PM}_{2.5}$ . USEPA retained the standard and included it with the 2006 standard in corresponding 40 CFR 50.13. *See* 71 Fed. Reg. 61144, 61176 (Oct. 17, 2006). This subsection (c) is derived from 40 CFR 50.13.

- d) 2012 Primary Annual Average and 24-Hour NAAQS for  $\text{PM}_{2.5}$ 
  - 1) The 2012 primary annual average NAAQS for  $\text{PM}_{2.5}$  is 12.0  $\mu\text{g}/\text{m}^3$  annual arithmetic mean concentration, and the 2012 primary 24-hour NAAQS for  $\text{PM}_{2.5}$  is 35  $\mu\text{g}/\text{m}^3$  24-hour average concentration, measured in the ambient air as  $\text{PM}_{2.5}$  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  $\text{PM}_{2.5}$  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  $\mu\text{g}/\text{m}^3$ .
  - 3) The 2012 primary 24-hour NAAQS for  $\text{PM}_{2.5}$  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  $\mu\text{g}/\text{m}^3$ .

BOARD NOTE: This subsection (d) is derived from 40 CFR 50.18.

(Source: Amended at 43 Ill. Reg. 3034, effective February 19, 2019)

### **Section 243.122 Sulfur Oxides (Sulfur Dioxide)**

- a) 1971 Primary Annual Average and 24-Hour NAAQS for Sulfur Oxides (as Sulfur Dioxide (SO<sub>2</sub>))
- 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 SO<sub>2</sub> 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 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: This subsection (a) is derived from 40 CFR 50.4. This subsection (a) no longer applies in the following areas in Illinois: Cook County (Lemont Township only), Peoria County (Hollis Township only), Tazewell County (Cincinnati and Pekin Townships only), Will County (DuPage and Lockport Townships only), Bureau County, Jasper County, Madison County (Wood River Township, an area of southeastern Alton Township, and an area of northern Chouteau Township only), Massac County, Putnam County, and Williamson County.

- b) 1971 Secondary Three-Hour NAAQS for Sulfur Oxides (as SO<sub>2</sub>)
- 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 SO<sub>2</sub> 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), 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 SO<sub>2</sub>)
- 1) The level of the 2010 primary one-hour NAAQS for sulfur oxides is 75 ppb, measured in the ambient air as SO<sub>2</sub>.
  - 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 SO<sub>2</sub> remains in effect until the federal conditions of 40 CFR 50.4(e) have been fulfilled, as outlined in subsection (a)(5) and the appended Board note.

(Source: Amended at 43 Ill. Reg. 3034, effective February 19, 2019)

### **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/m<sup>3</sup>), not to be exceeded more than once per year; and
  - 2) A one-hour average concentration of 35 ppm (40 mg/m<sup>3</sup>), 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:
- 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 (NO<sub>2</sub>).
- 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 NO<sub>2</sub>.
- c) The level of the 1971 secondary annual average NAAQS for nitrogen oxides is 0.053 ppm (100 µg/m<sup>3</sup>), annual arithmetic mean concentration, measured in the ambient air as NO<sub>2</sub>.
- 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) 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 (a) is derived from 40 CFR 50.15.

b) 2015 Primary and Secondary Eight-Hour NAAQS for Ozone

- 1) The level of the eight-hour primary NAAQS for ozone is 0.070 ppm, daily maximum eight-hour average, measured by a reference method based on appendix D to 40 CFR 50, incorporated by reference in Section 243.108, or an equivalent method designated by USEPA and listed in the List of Designated Methods or a Federal Register notice incorporated by reference in Section 243.108.
- 2) The eight-hour primary NAAQS for ozone is 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 0.070 ppm, as determined in accordance with appendix U to 40 CFR 50, incorporated by reference in Section 243.108.
- 3) The level of the secondary NAAQS for ozone is 0.070 ppm, daily maximum eight-hour average ozone concentration, measured by a reference method based on appendix D to 40 CFR 50, incorporated by reference in Section 243.108, and designated in accordance with part 53 of this chapter or an equivalent method designated by USEPA and listed in the List of Designated Methods or a Federal Register notice incorporated by reference in Section 243.108.
- 4) The eight-hour secondary NAAQS for ozone is 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 0.070 ppm, as determined in accordance with appendix U to 40 CFR 50, incorporated by reference in Section 243.108.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.19.

(Source: Amended at 43 Ill. Reg. 3034, effective February 19, 2019)

**Section 243.126      Lead**

- a) 1978 Primary and Secondary Quarterly Average NAAQS for Lead

BOARD NOTE: This subsection (a) is derived from 40 CFR 50.12. USEPA designated Granite City as nonattainment with the 2008 primary and secondary three-month average NAAQS for lead effective December 31, 2011 and an area of Chicago effective December 31, 2012. See 76 Fed. Reg. 72097, 79108 (Nov. 22, 2011); 75 Fed. Reg. 71033, 71042 (Nov. 22, 2010). Thus, this subsection (a) was obsolete on December 31, 2012, and the Board removed it.

- 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.

(Source: Amended at 43 Ill. Reg. 3034, effective February 19, 2019)

**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 <sub>2.5</sub> ( $35 \mu\text{g}/\text{m}^3$ ) 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	June 18, 2009	June 18, 2009
	2008	June 18, 2009	June 18, 2009
	2009	60 days after the end of the calendar quarter in which the event occurred or February 5, 2010, whichever date occurred first	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 <sub>2</sub> ) (100 ppb) Section 243.124(b) 40 CFR 50.11(b) 75 Fed. Reg. 6474 (Feb. 9, 2010)	2008	July 1, 2010	January 22, 2011
	2009	July 1, 2010	January 22, 2011
	2010	April 1, 2011	July 1, 2010
2010 one-hour sulfur oxides (as SO <sub>2</sub> ) (75 ppb) Section 243.122(c)(1) 40 CFR 17(a) 75 Fed. Reg. 35520 (June 22, 2010)	2008	October 1, 2010	June 1, 2011
	2009	October 1, 2010	June 1, 2011
	2010	June 1, 2011	June 1, 2011
	2011	60 days after the end of the calendar quarter in which the event occurred or March 31, 2012, whichever date occurred first	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<sub>2.5</sub> 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<sub>2.5</sub> 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)