ILLINOIS POLLUTION CONTROL BOARD
July 25, 2013

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| IN THE MATTER OF: | ) | |
| NATIONAL AMBIENT AIR QUALITY | ) | R13-11 |
| STANDARDS, USEPA REGULATIONS | ) | (Identical-in-Substance Rulemaking - Air) |
| (through December 31, 2012) | ) | |

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by J.A. Burke):

This rulemaking updates the ambient air quality standards in the Board's air pollution regulations (35 Ill. Adm. Code 243) to make them conform with National Ambient Air Quality Standards (NAAQS)[1] adopted by the United States Environmental Protection Agency (USEPA) pursuant to section 109 of the Clean Air Act (CAA) (42 U.S.C. § 7409 (2011)). This is the initial proceeding under a new identical-in-substance mandate adopted in P.A. 97-945 (eff. Aug. 10, 2012) to ensure that Illinois' regulations reflect USEPA's most recent NAAQS.

Today the Board adopts amendments that replace all existing Illinois ambient air quality standards with standards derived directly from the federal NAAQS codified in 40 C.F.R. 50. As explained below, the Board intends the Illinois ambient air quality standards adopted in this proceeding to be identical-in-substance with their federal counterparts, as "identical-in-substance" is defined by Section 7.2(a) of the Environmental Protection Act (Act) (415 ILCS 5/7.2(a) (2012)).

Section 10(H) of the Act (415 ILCS 5/10(H), as added by P.A. 97-945 (eff. Aug. 10, 2012)), mandates this rulemaking requiring the Board to "adopt ambient air quality standards specifying the maximum permissible short-term and long-term concentrations of various contaminants in the atmosphere; those standards shall be identical in substance to the national ambient air quality standards promulgated by . . . the United States Environmental Protection Agency in accordance with Section 109 of the Clean Air Act [(42 U.S.C. § 7409)]." 415 ILCS 5/10(H).

Section 10(H) of the Act (415 ILCS 5/10(H) (2012)) and Section 1-5(c)(1) of the Administrative Procedure Act (APA) (5 ILCS 100/5-1-5(c)(1) (2012)) also provide that Title VII of the Act and Section 5-35 of the APA (5 ILCS 100/5-35 (2012)) do not apply to this proceeding. Accordingly, the Board did not adopt a "First Notice" proposal and a "Second Notice" proposal for review by the Joint Committee on Administrative Rules (JCAR). However, as provided in Section 10(H) of the Act, and as explained in the two following segments of this opinion and order, the Board, before adopting final rule amendments, provided notice of the May 16, 2013 rulemaking proposal in the May 31, 2013 issue of the *Illinois Register*, held one public hearing on the proposal on June 26, 2013 in Springfield, as required by the federal Clean Air Act

[1] Throughout this opinion and in the regulatory text, the Board uses the abbreviation "NAAQS" to refer to a single standard and "NAAQS" to refer to multiple standards.

(33 U.S.C. § 7410(a) (2011)), and allowed for public comment for 45 days after publication of the *Illinois Register* notices, until July 15, 2013.

The Board reserved this docket to accommodate the initial set of amendments necessary to conform the Illinois ambient air quality standards to the federal NAAQS, as adopted and amended by USEPA through December 31, 2012. Board action was necessary to amend the Illinois ambient air quality standards to conform with the NAAQS adopted by USEPA, as amended through calendar year 2012.

The Board prefaces this opinion with procedural matters. The substantive discussions follow the procedural matters.

## PUBLIC COMMENTS

The Board adopted a proposal for public comment in this matter on May 16, 2013. A Notice of Proposed Amendments appeared in the May 31, 2013 issue of the *Illinois Register*, at 37 Ill. Reg. 7316. The Board invited public comment on the proposed amendments. The Board received public comments on that proposal for 45 days after that date of publication, until July 15, 2013. During the public comment period, the Board received comments from the Illinois Environmental Regulatory Group (IERG):

PC 1 First Notice Comments of IERG, by Alec M. Davis, General Counsel (dated July 15, 2013)

By PC 1, IERG supported the approach taken by the Board in the May 16, 2013 proposal for public comment. IERG maintains in PC 1 that the Board misapprehended that an area designation under the 2008 eight-hour NAAQS for ozone would effect the sunset of the 1979 one-hour ozone standard. IERG explained that USEPA's June 15, 2004 area designations under the 1997 eight-hour NAAQS for ozone was the triggering event. The Board has corrected the text of the adopted rules by removing the 1979 one-hour standard, as is discussed in the appropriate segment of the following discussions.

## FEDERALLY REQUIRED PUBLIC HEARING

The Board expects that the Illinois Environmental Protection Agency (Agency) will submit the present amendments as a revision to the Illinois State Implementation Plan (SIP) for various contaminants pursuant to section 110 of the federal Clean Air Act (42 U.S.C. § 7410(a) (2011) and the implementing USEPA regulations. *See* 40 C.F.R. 51.102 and appendix V (2012).

The Board held a public hearing in Springfield on June 26, 2013 in this rulemaking for the purpose of allowing interested members of the public to comment on the proposed amendments and the anticipated SIP revision that will result from their adoption. The Agency and the Illinois Environmental Regulatory Group (IERG) appeared at the hearing, and Mr. David Kolaz, formerly Chief of the Agency's Bureau of Air, presented testimony on behalf of IERG. Mr. Kolaz testified that the Board misapprehended that an area designation under the 2008 eight-hour NAAQS for ozone would effect the sunset of the 1979 one-hour ozone standard. Mr. Kolaz

asserted that it was the June 15, 2004 USEPA area designations under the 1997 eight-hour NAAQS for ozone that caused the sunset of the 1979 NAAQS. The Board has corrected the text of the adopted rules by removing the 1979 one-hour standard, as is discussed in the appropriate segment of the following discussions.

## DUE DATE AND SCHEDULE FOR COMPLETION

The Board must complete action to adopt amendments within one year of the date when USEPA has revised the NAAQS. 415 ILCS 5/7.2(b). Since USEPA adopted all of the federal NAAQS more than one year before the effective date of P.A. 97-945, the Board is interpreting that this initial round of amendments must be completed before August 10, 2013. Fulfilling the one-year mandate before that date will require proceeding according to the following schedule:

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| **Due date:** | **August 10, 2013** |
| **Proposal adopted date:** | **May 16, 2013** |
| *Illinois Register* publication date: | May 31, 2013 |
| Public hearing date: | June 26, 2013 |
| End of 45-day public comment period: | July 15, 2013 |
| **Adoption date:** | **July 25, 2013** |
| Possible filing and **effective date:** | **August 5, 2013** |
| Possible *Illinois Register* publication date: | August 15, 2013 |

## OVERVIEW OF THE FEDERAL NAAQS AND THIS PROCEEDING

The amendments adopted today are intended to make the Illinois ambient air quality standards identical-in-substance to the NAAQS adopted by USEPA. Today's amendments include USEPA revisions and ancillary actions, such as USEPA approvals of reference methods and equivalent methods, through December 31, 2012. The following table outlines the discussions and acts as a table of contents:

## The Context of This Identical-in-Substance Proceeding

The Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding. Rather, the Board reviews federal standards only to the extent necessary to make a "best fit" for those standards in the context of the Illinois regulatory scheme.

The Board tries to follow the structure and content of federal regulations where possible. This ensures the full incorporation of all necessary elements of the present federal standards, and it makes updating the regulations easier when future federal amendments occur.

Departures from the federal structure may occur for a variety of reasons and will be noted as needed below. Where more stringent pre-existing State standards exist that will continue in effect after incorporation of federal elements, the Board will incorporate a structure that retains those State standards. *See, e.g.*, RCRA Subtitle D Amendments (Amendments to 35 Ill. Adm. Code 810, 811, and 814), R93-10 (Sept. 15, 1993), slip op. at 3-5 (adding required federal elements into existing State regulations); Safe Drinking Water Act Regulations, R88-26 (Aug. 9, 1990), slip op. at 6-7 (retaining more stringent pre-existing State regulations within the body of new federal requirements).

## Overview of the Federal NAAQS

The federal CAA requires USEPA to assemble a list of air pollutants that "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 4208(a)(1) (2011). The purpose is to establish national primary and secondary NAAQS. A primary NAAQS is intended to protect public health, and a secondary NAAQS is intended to protect public welfare. 42 U.S.C. § 4209(b) (2011). USEPA is required to periodically review each NAAQS and revise it where USEPA determines that revision is necessary. USEPA is further required to establish an independent technical advisory committee to aid the periodic reviews of each NAAQS. 42 U.S.C. § 4209(d) (2011).

To date, USEPA has designated six "criteria" pollutants for establishment of primary and secondary NAAQS:

Carbon monoxide (CO) (*see* 40 C.F.R. 50.8 (2012));
Lead (Pb) (*see* 40 C.F.R. 50.12 and 50.16 (2012));
Nitrogen oxides ($NO_X$) (*see* 40 C.F.R. 50.11 (2012));
Ozone ($O_3$) (*see* 40 C.F.R. 50.9 and 50.15 (2012));
Particulate matter (PM) in various, evolving, standards:
Particulate matter (PM) (*see* 40 C.F.R. 50.6 (1986));

Particulate matter with an aerodynamic diameter of 10 micrometers (µm) or less ($PM_{10}$) (*see* 40 C.F.R. 50.6 (2012)); and

Particulate matter with an aerodynamic diameter of 2.5 micrometers (µm) or less ($PM_{2.5}$) (*see* 40 C.F.R. 50.7 (2012)); and

Sulfur oxides (as sulfur dioxide) ($SO_2$) (*see* 40 C.F.R. 50.4, 50.8, and 50.17 (2012)).

**The Section 10(H) Mandate and the Federal Regulations Included**

By P.A. 97-945, the General Assembly has created a new identical-in-substance rulemaking subject matter.[2] Effective August 10, 2012, the General Assembly revised 415 ILCS 5/7.2 and 10 to require the Board to adopt rules that are identical-in-substance to regulations adopted by USEPA pursuant to 42 U.S.C. § 4209. Those federal regulations are the federal NAAQS codified as 40 C.F.R. 50. Thus, 40 C.F.R. 50 is the principal focus of this proceeding. The Board, however, must consider exactly which segments of 40 C.F.R. 50 are required and whether segments of other federal regulations are necessary to fully incorporate the federal NAAQS into the Illinois air regulations.

The federal NAAQS in 40 C.F.R. 50 rely on at least three other segments of USEPA regulations. The first segment of USEPA regulations relates to USEPA-approved monitoring and testing methods required for demonstrating compliance. *See, e.g.*, 40 C.F.R. 50.4(c), 50.5(b), and 50.17(c) (2012) (specifying the methods for the NAAQS for sulfur dioxide). The second segment is the body of rules that prescribe the requirements for assembling, maintaining, and operating an ambient air monitoring network—*i.e.*, prescribing when, where, and how to use the required monitoring and testing methods. *See* 40 C.F.R. 58 (2012). The third segment is the series of USEPA area designations, which define the monitoring areas within each state, and which classify the attainment or non-attainment status of each air monitoring area for each criteria pollutant. *See* 40 C.F.R. 81 (2012). The applicability of many older NAAQS is determined by reliance on those area designations. *See, e.g.*, 40 C.F.R. 50.4(e), 50.9(b), and 50.12(b) (2012) (corresponding with 35 Ill. Adm. Code 243.122(a)(5), the 1971 primary NAAQS for sulfur oxides; 243.125(a)(2), the 1997 one-hour primary and secondary NAAQS for $O_3$; and 243.126(a)(2), the 1978 primary and secondary NAAQS for lead, respectively).

**Replacing the Existing Illinois Ambient Air Quality Standards**

In the context of this proceeding, pre-existing State ambient air quality standards exist in 35 Ill. Adm. Code 243. The Board intended that those standards be consistent with corresponding federal NAAQS. *See* Proposed Air Quality Standards, R72-7 (July 10, 1975), slip op. at 4-5, 14 (initial Board adoption of ambient air quality standards). The Board intended no more stringent State standard in the Illinois ambient air quality regulations. *See Id.* at 4-5 (observing adoption of the federal standards absent a reason to differ).

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[2] The stated purpose was to facilitate adoption of the federal NAAQS and the air permitting process in Illinois. *See* 97th Ill. Gen. Assem., Senate Proceedings, March 29, 2012, at 28; 97th Ill. Gen. Assem., House Proceedings, May 25, 2012, at 27.

Over time, the Illinois ambient air quality standards lagged behind adoption of the federal NAAQS. *See* Air Quality Standards Clean-Up: Amendments to 35 Ill. Adm. Code 217, 233, and 243, R09-19 (Sept. 22, 2011) (Second Notice opinion and order), slip op. at 4-8, 16; *see also* Air Quality Standards Clean-Up: Amendments to 35 Ill. Adm. Code 217, 233, and 243, R09-19 (Oct. 20, 2011), slip op. at 4-7 (adopted rule opinion and order). Thus, the existing Illinois NAAQS do not presently include any State requirements that are more stringent than the federal NAAQS, and they do not include all of the current federal NAAQS.

The mandate of Section 10(H) of the Act (415 ILCS 5/10(H) (2012)) arose in this context. The mandate requires that the Board adopt standards that are identical-in-substance to the federal NAAQS. The mandate further allows the Board to adopt more stringent State standards by general rulemaking. *See* 415 ILCS 5/10(H) (2012).

The Act generally requires that identical-in-substance rules closely follow the language and structure of the corresponding federal regulations. *See* 415 ILCS 5/7.2(a) (2012). The Board, however, routinely uses the limited flexibility in the statutory definition of "identical in substance" (*see* 415 ILCS 5/7.2(a) (2102)) to preserve more stringent existing State standards. *See, e.g.*, RCRA Subtitle D Amendments (Amendments to 35 Ill. Adm. Code 810, 811, and 814), R93-10 (Sept. 15, 1993); Safe Drinking Water Act Regulations, R88-26 (Aug. 9, 1990), at 6-7; Pretreatment Regulations, R86-44 (Dec. 3, 1987), at 7, 12, 23.

Since there are no existing Illinois ambient air quality standards that are more stringent than the federal NAAQS, the Board has little reason for significant deviation from the structure and language of each federal NAAQS. Further, retaining the structure and language of the individual NAAQS will facilitate future updates to the Illinois regulations as the federal NAAQS continue to evolve. The Board has replaced the structure and language of the existing Illinois ambient air quality standards with that of the federal NAAQS.

For the foregoing reasons, the Board has opted to replace the existing Illinois ambient air quality standards with the federal NAAQS. The new language is drawn directly from 40 C.F.R. 50, retaining the structure and language of the federal rules. There are deviations discussed throughout this opinion and order. The Board notes three of the exceptions here.

**Retaining the Existing Illinois Structure: Combining All NAAQS for a Criteria Pollutant.** The Board has combined the multiple NAAQS for each criteria pollutant into a single provision. Thus, the primary and secondary NAAQS for $PM_{10}$ and $PM_{2.5}$ from 40 C.F.R. 50.6, 50.7, and 50.13 are combined in Section 243.120; the NAAQS for sulfur oxides from 40 C.F.R. 50.4, 50.5, and 50.17 are combined in Section 243.122; and the NAAQS for ozone from 40 C.F.R. 50.9, 50.10, and 50.15 are combined in Section 243.125; and the NAAQS for lead from 40 C.F.R. 50.12 and 50.16 are combined in Section 243.126. USEPA itself combined the NAAQS for nitrogen oxides into a single provision, in 40 C.F.R. 50.11 (corresponding with 35 Ill. Adm. Code 243.124). There is no need to combine standards as to the federal NAAQS for carbon monoxide, as there is only one federal standard, in 40 C.F.R. 50.8 (corresponding with 35 Ill. Adm. Code 243.123).

**Use of the Singular or Plural to Refer to Primary and Secondary NAAQS.** USEPA often uses the plural to refer to primary and secondary NAAQS where both are embodied in a single standard. *See, e.g.*, 40 C.F.R. 50.6(a) (1987 primary and secondary 24-hour NAAQS for $PM_{10}$) and 50.9(a) (1997 primary and secondary one-hour NAAQS for ozone). The Board has consistently used the singular to refer to NAAQS that embody the primary standard and the secondary standard in a single number, which the Board perceives as a single primary and secondary standard. *See, e.g.*, 35 Ill. Adm. Code 243.120(a)(1) and 243.125(a)(1) (corresponding with the above-cited federal NAAQS). On the other hand, the Board has used the plural where two separate numerical standards are presented. For example, the provision that recites the 2010 NAAQS for nitrogen oxides includes a one-hour primary NAAQS and an annual average secondary NAAQS. *See* 40 C.F.R. 50.11(b) and (c) (2012). *See* 35 Ill. Adm. Code 243.124(b) and (c) (corresponding with 40 C.F.R. 50.11(b) and (c) (2012)). As another example, the provision relative to the 1971 eight-hour and one-hour primary NAAQS for carbon monoxide recites an eight-hour average concentration and a separate one-hour average concentration. *See* 40 C.F.R. 50.8(a)(1) and (a)(2) (2012).

**Standardized Naming of Each NAAQS.** To accommodate the combined structure and clarify the rules, the Board has standardized the names for each NAAQS. The Board-standardized names indicate the year that USEPA adopted each standard. Each name indicates whether the standard is a primary standard, a secondary standard, or primary and secondary standard. Each name indicates the duration of each reported monitoring result—"annual average," "quarterly average" (or "three-month average"), "24-hour," "eight-hour," "three-hour," or "one-hour."[3] Each of the standardized names states "NAAQS" followed by the name of the particular criteria pollutant—*i.e.*, "carbon monoxide," "lead," :nitrogen oxides," "ozone," "$PM_{10}$" or "$PM_{2.5}$," or "sulfur oxides." These standardized names are rigidly applied throughout the text of the rules, and they are consistently used throughout this opinion. Thus, each standardized name for the NAAQS is structured as follows:

| [Year] | "primary" and/or "secondary" | [monitoring period] | "NAAQS for" | [pollutant name] |
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Each federal NAAQS is discussed below, including consideration of development of the standard. That discussion of the individual NAAQS, organized on a priority pollutant-by-priority pollutant basis, explains the Board's selection of each standardized name.

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[3] The monitoring for each NAAQS occurs over specific periods, the monitoring results are analyzed in specific ways, and the results are reported in a time-period-analyzed basis. Thus, some of the NAAQS are reported and considered on a quarterly or annual-average basis. *See, e.g.*, 40 C.F.R. 50.4(a) (1971 primary annual average NAAQS for sulfur oxides) and 50.12(a) (2008 primary and secondary three-month average NAAQS for lead). Some are reported on a short-term basis of a one-, three-, eight-, or 24-hour average. *See, e.g.*, 40 C.F.R. 50.4(a) (1971 primary 24-hour NAAQS for sulfur oxides), 50.5(a) (1971 secondary three-hour NAAQS for sulfur oxides), 50.8(a) (1971 primary eight-hour NAAQS for carbon monoxide), and 50.13(a) (2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$). In the instance of the short-term averages, the Board has omitted the word "average" when creating a standardized name.

Using the above-described convention, the standardized NAAQS names (together with the corresponding citations to them in the Illinois and federal rules) are tabulated as follows:

Particulate matter (PM):

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1987 primary and secondary 24-hour NAAQS for $PM_{10}$" | 243.120(a) | 50.6 |
| "1997 primary and secondary annual average NAAQS for $PM_{2.5}$" | 243.120(b) | 50.7 |
| "1997 primary and secondary 24-hour NAAQS for $PM_{2.5}$" | 243.120(b) | 50.7 |
| "2006 primary and secondary annual average NAAQS for $PM_{2.5}$" | 243.120(c) | 50.13 |
| "2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$" | 243.120(c) | 50.13 |

Sulfur oxides:

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1971 primary annual average NAAQS for sulfur oxides" | 243.122(a) | 50.4 |
| "1971 primary 24-hour NAAQS for sulfur oxides" | 243.122(a) | 50.4 |
| "1971 secondary three-hour NAAQS for sulfur oxides" | 243.122(b) | 50.5 |
| "2010 primary one-hour NAAQS for sulfur oxides" | 243.122(c) | 50.17 |

Carbon monoxide:

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1971 eight-hour and one-hour NAAQS for carbon monoxide" | 243.123 | 50.8 |

Nitrogen oxides:

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1971 primary annual average NAAQS for nitrogen oxides" | 243.124(a) | 50.11(a) |
| "2010 primary one-hour NAAQS for nitrogen oxides" | 243.124(b) | 50.11(b) |
| "1971 secondary annual average NAAQS for nitrogen oxides" | 243.124(c) | 50.11(c) |

Ozone:

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1979 primary and secondary one-hour NAAQS for $O_3$" | None | 50.9 |
| "1997 primary and secondary eight-hour NAAQS for $O_3$" | 243.125(a) | 50.10 |
| "2008 primary and secondary eight-hour NAAQS for $O_3$" | 243.125(b) | 50.15 |

Lead:

| Standardized Name | 35 Ill. Adm. Code | 40 C.F.R. |
|---|---|---|
| "1978 primary and secondary quarterly average NAAQS for lead"[4] | 243.126(a) | 50.12 |
| "2008 primary and secondary three-month average NAAQS for lead" | 243.126(b) | 50.16 |

**Removal of Two Illinois Rules**

The removal of two existing Illinois rules requires brief specific discussion. The principal reason for their removal is that these rules are not directly derived from the federal NAAQS. The first is the non-degradation clause of 35 Ill. Adm. Code 243.104. The second is the monitoring provision of 35 Ill. Adm. Code 243.106. Especially in the case of the "nondegradation" rule, the Board does not want misunderstanding to arise by the removals.

**Removal of the "Nondegradation" Rule.** The non-degradation rule predates the Environmental Protection Act. The Board adopted the rule from earlier rules of the Air Pollution Control Board. *See* Emission Standards, R71-23 (Apr. 13, 1972), slip op. at 44-45. When adopting the rule, the Board explained that non-degradation "embodies the principle . . . that parts of the State now clean shall not be unnecessarily degraded." *Id.* The rule itself is less clear than that brief description. The Board has removed the non-degradation clause of 35 Ill. Adm. Code 243.104 because (1) it might conflict with a newly added federal rule; (2) it is not necessary in the context of NAAQS; and (3) it is not possible to correct its flaws in the context of this proceeding.

Initially, the non-degradation clause may conflict the federal non-degradation requirement in 40 C.F.R 50.2(c) that the Board has incorporated at 35 Ill. Adm. Code 243.102(c). That statement, added to the Illinois rules, is as follows: "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." 35 Ill. Adm. Code 243.102(c). To the extent

[4] This assumes that the Board does not omit the 1978 primary and secondary NAAQS for lead, as is discussed beginning on page 52 of this opinion and order.

that the clause relates to the NAAQS themselves, the differences between the Illinois rule and the newly added federal statement could conflict. Furthermore, by incorporating the federal language in 35 Ill. Adm. Code 243.102(c), the Illinois rules retain the intent of 35 Ill. Adm. Code 243.104 that air quality in Illinois will not be degraded.

Second, the Board views non-degradation as directly related to air permitting, not as a segment of the federal NAAQS. To the extent that the Illinois non-degradation rule does not directly relate to the ambient air quality standards, the statement is not necessary in the present context. This is the principle embodied in the federal Prevention of Significant Degradation (PSD) requirements. *See* 42 U.S.C. §§ 7470 *et seq.* (2011); 40 C.F.R. 51.166 and 52.21 (2012).

Finally, the language of the rule is flawed. The opening statement imposes no requirement. Use of the word "will be maintained" is a statement of present intent, which does not impose an imperative, as would language that used a word such as "must." The second sentence is ambiguous as to the meaning of "lowered." Generally, a "lowered" pollutant loading is an improved air quality. A higher pollutant loading is a degraded air quality. Use of the word "degraded" in place of "lowered" would remove this ambiguity. The Board cannot amend the rule in this way in the context of this identical-in-substance proceeding.

**Removal of the "Monitoring" Rule.** Existing 35 Ill. Adm. Code 243.106 requires the use of fixed or mobile monitoring stations located beyond the premises on which an emissions source is located, "according to the guidelines for established monitoring networks" that USEPA has developed. USEPA has codified the requirements for design, location, and operation of monitoring networks as 40 C.F.R. 58. *See* 40 C.F.R. 50 (2012).

The Board has removed the Illinois monitoring provision for several reasons. Initially, while important to implementation of the NAAQS, this provision is not a necessary segment of the NAAQS themselves. USEPA codified the monitoring network requirements separately from the NAAQS. Further, the authority used by USEPA for adoption of the monitoring network requirements does not include "Section 109 of the Clean Air Act" as required by the present identical-in-substance mandate. *See* 415 ILCS 5/10(H), as added by P.A. 97-945, eff. Aug. 10, 2012; 40 C.F.R. 58 (2012) (source note). Second, the federal requirements for design, location, and operation of monitoring networks are self-implementing. *See, e.g.*, 40 C.F.R. 50.10(a) and 50.11(a) (2012). Thus, no Illinois provision is necessary in this regard. Third, the various NAAQS require monitoring in compliance with specified procedures that incorporate the federal standards for design, location, and operation of monitoring networks. Those standards are referenced in several of the methods and procedures required for monitoring. *See* Appendices A-1, A-2, B, C, G, H, I, J, K, L, N, O, P, Q, R, S, and T to 40 C.F.R. 50 (2012).

Nevertheless, should the record indicate that the Board must retain a provision relative to design, location, and operation of monitoring stations, the Board could retain 35 Ill. Adm. Code 243.106 revised to read as follows:

> All monitoring performed to fulfill the requirements of this Part must be performed at stations and networks of stations designed, located, and operated

according to plans approved by USEPA according to the requirements of 40 C.F.R. 58.[5]

**Inclusion of Prescribed Methods, Required Interpretations, and Special-Case Methods.**

USEPA has approved multiple methods for use in demonstrating compliance with each NAAQS. The methods that the standards require for determining compliance are an essential aspect of the federal NAAQS. Different methods can produce different measurements. Thus, USEPA has specified the methods required for use and reserved authority to itself for approval of alternative methods.

The approved methods are of three types: (1) codified reference methods, (2) USEPA-designated reference methods, and (3) USEPA-designated equivalent methods. Each NAAQS refers to a reference method that is codified in an appendix to 40 C.F.R. 50. Many of the NAAQS further allow the alternative use of another USEPA-designated reference method. Other NAAQS allow the alternative use of a USEPA-designated equivalent method. USEPA has further added appendices to 40 C.F.R. 50 that recite data handling conventions for some of the NAAQS. The following paragraphs outline the considerations relative to inclusion of these various methods-related materials into Illinois NAAQS rules.

**List of Designated Methods.** USEPA designates methods for use in monitoring ambient air quality by prescribed procedures. 40 C.F.R. 53.2 and 53.3 (2012); *see also* 40 C.F.R. 53.11, 53.14, and 53.16 (2012) (relating to cancellation, modification, and supersession of methods designations, respectively). Under federal law, USEPA's designation of a method is effective on the date of *Federal Register* publication. 40 C.F.R. 53.8(a) (2012). USEPA later compiles all of the methods designations into a single reference document known as the "List of Designated Reference and Equivalent Methods," from the USEPA, National Exposure Research Laboratory (List of Designated Methods). 40 C.F.R. 53.8(c) (2012). Thus, there is a short time between when a designated method is available for use and when it appears in the List of Designated Methods.

The List of Designated Methods identifies the individual methods that are permissible for demonstrating compliance with each NAAQS, providing the following information items: (1) the method type; (2) the method source; (3) the method title; (4) a description of the method procedure, which may include notes on use of the method; (5) one or more citations to *Federal Register* notices pertaining to USEPA designation of each method; and (6) the date of any later modifications of the method (in some of the entries). Separate tabulations repeat some of the methods identifications in a summary form, including a "method code" number. Finally, the List of Designated Methods includes a listing of methods sources and contact information. The List of Designated Methods includes all non-codified USEPA-designated reference methods and equivalent methods. The List does not include all of the codified reference methods.

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[5] The Board would normally incorporate 40 C.F.R. 58 by reference when imposing its requirements. The Board, however, does not believe that incorporation by reference is necessary when requiring use of a plan that is approved by USEPA as compliant with 40 C.F.R. 58.

The latest version of the List of Designated Methods is dated December 17, 2012. This edition of the List includes all methods designated by USEPA through that date. USEPA designates reference method and equivalent methods on an ongoing basis. When USEPA designates a method, it publishes a *Federal Register* notice of the designation. USEPA also posts a link to information about the newly designated reference method and equivalent methods on the Technology Transfer Network, Ambient Monitoring Technology Information Center (TTN-AMTIC) website.[6] USEPA periodically updates the List of Designated Methods to include the federal reference methods (FRMs) and federal equivalent methods (FEMs) designated since the last version of the List.[7] For example, the December 17, 2012 version of the List added equivalent methods designated by USEPA on September 11, 2012 and October 5, 2012. *See* List of Designated Methods at 2; 77 Fed. Reg. 60985 (Oct. 5, 2012); 77 Fed. Reg. 55832 (Sept. 11, 2012).

**Incorporation of Designated Methods.** The Board will incorporate by reference all USEPA methods designations into the Illinois NAAQS rules. For those methods listed in the List of Designated Methods, the incorporation by reference in 35 Ill. Adm. Code 243.108 will rely on the latest version of the List to identify the methods designated for each NAAQS. For those methods that have not yet appeared in the List as of the date of adoption of future amendments, the Board will include incorporation by reference to the *Federal Register* notice of the USEPA designation.

When conducting the necessary semiannual reviews of USEPA actions to determine what identical-in-substance rulemaking action is necessary relative to the NAAQS, the Board will check the TTN-AMTIC website for any updates to the list or USEPA methods designations that may exist only in the form of a *Federal Register* notice, and either update the version of the List of Designated Methods incorporated by reference or incorporate by reference *Federal Register* notices, as appropriate.

As a matter of Illinois law, inclusion of a USEPA-designated reference method or equivalent method is effective on the date that the Board files an amendment to incorporate that method by reference. *See* 5 ILCS 100/5-40(d) (2012). This will result in an unavoidable delay up to a year (*see* 415 ILCS 5/7.2(b) (2012)) between the dates when USEPA has designated a new method and when the use of that method is acceptable as a matter of Illinois law.

**References to Methods in the Text of the NAAQS.** Most of the federal NAAQS refer to designated methods in the text of the NAAQS by reference to methods "designated in accordance with part 53 of this chapter." *See* 40 C.F.R. 50.4(c), 50.5(b), 50.6(c)(1) and (c)(2), 50.7(a)(1) and (a)(2), 50.8(b)(1) and (b)(2), 50.9(a), 50.10(a), 50.11(a) and (d)(2), 50.13(a)(1) and (a)(2), 50.15(a), 50.16(a)(1) and (a)(2), and 50.17(c). One NAAQS omits this language, even though the use of USEPA-designated methods is required. *See* 40 C.F.R. 50.12(a) (2102) (lead).

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[6] http://www.epa.gov/ttn/amtic/cpreldoc.html.

[7] The four prior published versions of the List of Designated Methods were dated June 6, 2012, October 12, 2011, April 1, 2011, and February 1, 2011.

The Illinois NAAQS rules will specify use of methods "designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108." *See* 35 Ill. Adm. Code 243.120(a)(3)(A), (a)(3)(B), (b)(1)(A), (b)(1)(B), (c)(1)(A), and (c)(1)(B); 243.122(a)(3), (b)(2), and (c)(3); 243.123(b)(1) and (b)(2); 243.124(d)(1) and (d)(2); 243.125(a)(1), (b)(1), and (c)(1); and 243.126(a)(1), (b)(1)(A), and (b)(1)(B). USEPA alone has authority to designate monitoring methods. *See* 40 C.F.R. 53.8(a), 53.11(a), 53.14(c), and 53.16(a) (2012); *see also* 42 U.S.C. § 7403(c) (2011) (requiring USEPA to establish "methods for sampling, measurement, monitoring, analysis, and modeling of air contaminants"). The language chosen by the Board for each of the NAAQS translates this federal requirement into their Illinois counterparts.

**Standardization of Terms: FRMs, FEMs, and List of Designated Methods.** In the course of identical-in-substance rulemaking, the Board routinely attempts to standardize the language used where variation appears in the language of federal rules. That is true in this proceeding in several regards, but particularly in the naming of monitoring methods. Other shifts in phrasing are considered in later segments of this discussion.

To standardize the naming of USEPA-designated methods, the Board has combined usage from two segments of the USEPA regulations: (1) the NAAQS rules themselves; and (2) the rules pertaining to methods designations. As a result, the Illinois NAAQS rules define the standardized terms "federal reference method" and "federal equivalent method" in 35 Ill. Adm. Code 243.102.

The definition of "federal reference method" combines the parallel federal definitions of "reference method," in corresponding 40 C.F.R. 50.1(f), and "federal reference method" in 40 C.F.R. 53.1, which is in the provisions for approval of these methods. The Board has further used the defined abbreviation "FRM" for this term throughout the substantive provisions of the NAAQS-derived regulations. This is without regard to whether the method is codified as an appendix to 40 C.F.R. 50 or the method is a USEPA-designated reference method that is based on a method codified as an appendix.

Similarly, the definition of "federal equivalent method" combines the parallel federal definitions of "equivalent method," in corresponding 40 C.F.R. 50.1(g), and "federal equivalent method" in 40 C.F.R. 53.1. The Board has used the defined abbreviation "FEM" to refer to the equivalent methods.

The following discussions use the abbreviations "FRM" and "FEM" to refer to the methods. The discussions distinguish between the codified and USEPA-designated non-codified FRMs where necessary.

***Codified and Non-Codified FRMs.*** The federal NAAQS include two types of FRMs. There are the FRMs codified in appendices to 40 C.F.R. 50, and there are non-codified FRMs that USEPA has designated. The federal NAAQS use two distinct phrasings to allow use of FRMs. The Board here observes possible inconsistent usage in the federal language, but makes no attempt to reconcile the language. The revisions to the federal text that the Board has made

are limited to standardizations of terms. The Board intends that the Illinois NAAQS rules have the same substantive effect as do the federal NAAQS upon which they are based.

Most of the NAAQS provisions describe the permissible FRMs in the following terms: "a reference method based on [the reference method cited in the] appendix . . . and designated [by USEPA]." *See* 40 C.F.R. 50.6(c)(1) ($PM_{10}$), 50.7(a)(1) ($PM_{2.5}$), 50.8(b)(1) (carbon monoxide), 50.9(a) (ozone), 50.10(a) (ozone), 50.11(d)(1) (nitrogen oxides), 50.13(a)(1) ($PM_{2.5}$), and 50.15(a) (ozone) (2012). The List of Designated Methods includes numerous non-codified FRMs for these contaminants, but none of the codified FRMs from 40 C.F.R. 50. *See* List of Designated Methods, at 4-9 (16 for $PM_{10}$), 10-15 (17 for $PM_{2.5}$), 25-30 (nine for ozone), 31-34 (20 for carbon monoxide), and 35-41 (26 for nitrogen oxides). The absence of codified FRMs in the List for these contaminants is literally consistent with the term "an FRM based on [the reference method cited in] appendix . . . and designated by USEPA."

The Board has followed the federal language very closely in the corresponding Illinois NAAQS provisions, with three shifts in language discussed in the immediately foregoing paragraphs: (1) the Board standardized usage of the defined term "an FRM"; (2) the Board clearly stated the requirement for USEPA-designation of the FRM; and (3) the Board added a reference to the List of Designated Methods. Thus, the corresponding Illinois NAAQS use the phrasing "an FRM based on appendix . . . and designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108." *See* 35 Ill. Adm. Code 243.120(a)(3)(A), (b)(1)(A), and (c)(1)(A) ($PM_{10}$ and $PM_{2.5}$); 243.123(b)(1) (carbon monoxide); 243.124(d)(1) (nitrogen oxides); and 243.125(a)(1), (b)(1), and (c)(1) (ozone).

The Board notes the potential for ambiguities in the federal language. The first ambiguity concerns whether some FRMs are directly available for use when USEPA has specified use of "an FRM based on" the codified FRM. The second, related, ambiguity is whether a codified FRM is available for use even though that FRM is not included in the List of Designated Methods.

The NAAQS for carbon monoxide, ozone, nitrogen oxides, $PM_{10}$, and $PM_{2.5}$ require use of an FRM "based on" an associated appendix to 40 C.F.R. 50. *See* 40 C.F.R. 50.6(c)(1) (2012) ("based on appendix J" for $PM_{10}$); 40 C.F.R. 50.7(a)(1) and 50.13(a)(1) (2012) ("based on appendix L" for $PM_{2.5}$); 40 C.F.R. 50.8(b)(1) (2012) ("based on appendix C" for carbon monoxide); 40 C.F.R. 50.9(a), 50.10(a), and 50.15(a) (2012) ("based on appendix D" for ozone); 40 C.F.R. 50.11(d)(1) (2012) ("based on appendix F" for nitrogen oxides). Further, the List of Designated Methods does not include listings for Appendices C, D, F, J, and L to 40 C.F.R. 50, relative to carbon monoxide, ozone, nitrogen oxides, $PM_{10}$, and $PM_{2.5}$, respectively. The general rules relative to FRM designations for $PM_{10}$, $PM_{2.5}$, carbon monoxide, ozone, and nitrogen oxides require that the FRM "meets all requirements specified in" the particular appendix associated with that FRM. *See* 40 C.F.R. 53.2(a)(2), (a)(3), and (b) (2012).

The NAAQS for sulfur oxides add to the potential for ambiguity. The three 1971 NAAQS for sulfur oxides (the 1971 primary annual average NAAQS for sulfur oxides, the 1971 primary 24-hour NAAQS for sulfur oxides, and the 1971 secondary three-hour NAAQS for sulfur oxides) use a second term to refer to the permissible FRM: "the reference method

described in appendix [A-2]." *See* 40 C.F.R. 50.4(c) and 50.5(b) (2012). The general rules for methods designations allow no manual method other than the codified FRM in appendix A-2 to 40 C.F.R. 50. *See* 40 C.F.R. 53.2(a)(1) (2012). The general rules further specify that an automated FRM for sulfur oxides "must use the measurement principle and calibration procedure specified in" Appendix A-1 to 40 C.F.R. 53.2(b) (2012). Consistent with use restricted to the codified FRM for sulfur oxides is the fact that the only FRM included in the List of Designated Methods is the manual method of Appendix A-2 to 40 C.F.R. 50. *See* List of Designated Methods, at 18.

On the other hand, the 2010 primary one-hour NAAQS for sulfur oxides uses the term "an FRM based on appendix [A-2] or A-1." *See* 40 C.F.R. 50.17(c) (2012). This language is that used for the NAAQS for which no codified FRM is included in the List of Designated methods.

The NAAQS for lead are also unique cases that enhance the potential for ambiguity. The lead NAAQS require an FRM "based on appendix G." *See* 40 C.F.R. 50.12(a) and 50.16(a)(1) (2012). The only FRM included in the List of Designated Methods is Appendix G. List of Designated Methods, at 42. Further, the general rules for FRM designation explicitly state that "other manual methods for lead will not be considered for a reference method determination," and they do not provide for approval of automated FRMs for lead. 40 C.F.R. 53.2(a)(1) and (b) (2102).

The Board has made no effort to clarify the federal language in this regard. The Board has followed the federal language with the above-described changes, retaining any potential ambiguities. If there is any difference in meaning between "an FRM based on" and "the FRM described in" language, the Board does not wish to blur any distinctions. The only distinction that the Board makes is that some FRMs are codified and others are non-codified. Further, the Board observes that only two of the codified FRMs are included in List of Designated Methods.

From a practical perspective, in the context of this identical-in-substance proceeding, the main difference between a codified FRM and a non-codified FRM is how each type is incorporated by reference into the Illinois regulations. From the broader perspective of what USEPA intended as to the meaning of the rules, the Board cannot mitigate any potential for ambiguity.

***Non-Codified FEMs.*** The third type of USEPA-designated method is an FEM. All of the FEMs are non-codified. USEPA refers to them all (often conjunctively with FRMs) with uniform language: "an equivalent method designated in accordance with part 53 of this chapter." *See* 40 C.F.R. 50.4(c), 50.5(b), 50.6(c)(2), 50.7(a)(2), 50.8(b)(2), 50.11(d)(2), 50.13(a)(2), 50.15(a), 50.16(a)(2), and 50.17(c) (2012) (NAAQS for sulfur oxides, $PM_{10}$, $PM_{2.5}$, carbon monoxide, nitrogen oxides, ozone (except the 1997 NAAQS), and lead). The federal regulations include two consistent variations on this language: (1) the NAAQS for lead omits "designated in accordance with part 53 of the chapter" (*see* 40 C.F.R. 50.12(a) (2012)); and (2) the 2010 NAAQS for sulfur oxides capitalizes "Federal Equivalent Method" and adds "(FEM)" (*see* 40 C.F.R. 50.17(c) (2012)). The List of Designated Methods includes all of the FEMs. *See* List of Designated Methods, at 4-9 (11 for $PM_{10}$), 10-15 (17 for $PM_{2.5}$), 18-24 (34 for sulfur oxides), 25-

30 (23 for ozone), 31-34 (none for carbon monoxide), 35-41 (five for nitrogen oxides), and 42-45 (27 for lead).

Only two federal NAAQS do not refer to the use of an FEM. These are the 1997 primary and secondary one-hour and eight-hour NAAQS for ozone. Instead, these NAAQS recite only the use of an FRM. *See* 40 C.F.R. 50.9(a) and 50.10(a) (2012). The Board could find no explanation why these standards do not refer to FEMs. *See* 62 Fed. Reg. 38856 (July 18, 1997) (adopting the 1997 standards). Further, the List of Designated Methods includes 23 FEMs for ozone. *See* List of Designated Methods at 25-30.

The Board has uniformly used "an FEM designated by USEPA and listed in List of Designated Methods, incorporated by reference in Section 243.108" throughout all of the NAAQS, except for the 1997 primary and secondary NAAQS for ozone. *See* 35 Ill. Adm. Code 243.120(a)(3)(B), (b)(1)(B), and (c)(1)(B); 243.122(a)(3), (b)(2), and (c)(3); 243.123(b)(2); 243.124(d)(2); 243.125(a)(1), (b)(1), and (c)(1); and 243.126(a)(1) and (b)(1)(A) (NAAQS for $PM_{10}$, $PM_{2.5}$, sulfur oxides, carbon monoxide, nitrogen oxides, ozone (2008 NAAQS), and lead. This meant conforming the two consistent variations in language of the federal NAAQS for sulfur oxides and lead, cited above. *See* 35 Ill. Adm. Code 243.122(a)(3), (b)(2), and (c)(3) and 243.126(a)(1) and (b)(1)(B).

On the other hand, the Board has not tried to reconcile the potential inconsistency with regard to the 1997 ozone standards. The Board has added no references to FEMs relative to those two NAAQS. *See* 35 Ill. Adm. Code 243.125(a)(1) and (b)(1).

**The Difference Between FRMs and FEMs.** From the practical perspective of use, the Board sees no difference between an FRM (whether codified or non-codified) and an FEM. The federal NAAQS authorize the use of either type of method. Still, there is a qualitative difference between the two types of methods. USEPA recited as follows with regard to methods for $PM_{2.5}$:

> [R]eference methods . . . are intended to provide for uniform, reproduceable [sic] measurements of . . . [criteria pollutant] concentrations in ambient air to serve as a measurement standard for the primary purpose of making comparisons to the NAAQS. Equivalent methods . . . allow for the consideration and introduction of new and innovative . . . [criteria pollutant] measurement technologies for this same purpose, provided such new technologies can be shown to provide . . . [criteria pollutant] measurements comparable to reference measurements under a variety of typical monitoring conditions. 62 Fed. Reg. 38764, 65 (July 18, 1997).

The Board observes that the federal rules divide FEMs for $PM_{2.5}$ into three classes: Class I, Class II, and Class III. The distinctions are based on the analyzer used. *See* 40 C.F.R. 53.1 (2012) (definitions of "Class I equivalent method," "Class II equivalent method," and "Class III equivalent method"). The performance characteristics and designation procedures for each class differs. *See* 40 C.F.R. 53.3(a)(2) and (a)(3) (2012); table C-4 to subpart C of 40 C.F.R. 53 (2012). USEPA explained that the classes are intended "[t]o minimize the number and extent of performance tests to which candidate equivalent methods are subjected. . . ." 62 Fed. Reg.

38764, 66 (July 18, 1997). Since the classes of FEMs do not relate directly to any NAAQS, the Board does not need to include these classes in the Illinois NAAQS rules.

**Interpretations: Conventions for Data Management and Analysis.** Many of the federal NAAQS reference "interpretations" that outline the procedure for using monitoring data to determine compliance with the NAAQS. All of these interpretations are embodied in an appendix to 40 C.F.R. 50. The federal NAAQS require use of the interpretations as follows:

Appendix H: The 1997 primary and secondary one-hour NAAQS for ozone requires use of Appendix H to 40 C.F.R. 50 "to determine when the expected number of days per calendar" is below the regulatory threshold level. *See* 40 C.F.R. 50.9(a) (2012); Appendix H to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix I: The 1997 primary and secondary eight-hour NAAQS for ozone requires determination of compliance using the "data handling conventions and computations" of Appendix I to 40 C.F.R. 50. *See* 40 C.F.R. 50.10(b) (2012); Appendix I to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix K: The 1987 primary and secondary 24-hour NAAQS for $PM_{10}$ requires determination of compliance using the "computations" of Appendix K to 40 C.F.R. 50. *See* 40 C.F.R. 50.6(c)(1) (2012); Appendix K to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix N: The 1997 and 2006 primary and secondary annual average and 24-hour NAAQS for $PM_{2.5}$ (four NAAQS) require determination of compliance using the "data handling conventions and computations" of Appendix N to 40 C.F.R. 50. *See* 40 C.F.R. 50.7(b) and 50.13(b) (2012); Appendix N to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix P: The 2008 primary and secondary eight-hour NAAQS for ozone requires determination of compliance using the "data handling conventions and computations" of Appendix P to 40 C.F.R. 50. *See* 40 C.F.R. 50.15(b) (2012); Appendix P to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix R: The 2008 primary one-hour NAAQS for sulfur oxides requires determination of compliance using the "data handling conventions and computations" of Appendix R to 40 C.F.R. 50. *See* 40 C.F.R. 50.16(b) (2012); Appendix R to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix S: The 1971 primary annual average and 2010 primary one-hour NAAQS for nitrogen oxides (two NAAQS) require determination of compliance using the "data handling conventions and computations" of Appendix S to 40 C.F.R. 50. *See* 40 C.F.R. 50.11(e) and (f) (2012); Appendix S to 40 C.F.R. 50 (2012) (introductory paragraph).

Appendix T: The 2010 primary one-hour NAAQS for sulfur oxides requires determination of compliance using the "data handling conventions and computations" of Appendix T to 40 C.F.R. 50. *See* 40 C.F.R. 50.17(b) (2012); Appendix T to 40 C.F.R. 50 (2012) (introductory paragraph).

Some of the oldest existing NAAQS do not require use of interpretations, including the following:

The 1971 primary annual average NAAQS for sulfur oxides (*see* 40 C.F.R. 50.4 (2012));
The 1971 primary annual average NAAQS for sulfur oxides (*see* 40 C.F.R. 50.4 (2012));
The 1971 secondary three-hour NAAQS for sulfur oxides (*see* 40 C.F.R. 50.5 (2012));
The 1971 primary eight-hour NAAQS for carbon monoxide (*see* 40 C.F.R. 50.8 (2012));
The 1971 primary one-hour NAAQS for carbon monoxide (*see* 40 C.F.R. 50.8 (2012));
The 1971 secondary annual average NAAQS for nitrogen oxides (*see* 40 C.F.R. 50.11 (2012)); and
The 1978 primary and secondary quarterly average NAAQS for lead (*see* 40 C.F.R. 50.12 (2012)).

**The Special Case FRMs of Appendices B, O, and Q.** Three codified FRMs are not directly relied on by any NAAQS. The Board has included all three FRMs in the Illinois NAAQS because each is substantively relied on in another codified FRM. The following paragraphs explain the special circumstances of each of these codified FRMs.

***Appendix B: FRM for Total Suspended Particulate Matter.*** An old NAAQS for particulate matter (PM) formerly relied on Appendix B to 40 C.F.R. 50. *See* 40 C.F.R 50.6 (1983). USEPA retained Appendix B to 40 C.F.R. 50, when USEPA subsequently replaced the PM NAAQS with the $PM_{10}$ NAAQS and Appendix J to 40 C.F.R. 50 for $PM_{10}$ supplanted Appendix B for PM. USEPA did so because Appendix B is substantively referenced in Appendix G to 40 C.F.R. 50, for the purposes of the lead NAAQS. *See* 52 Fed. Reg. 24634, 48 (July 1, 1987).

The substantive reliance on Appendix B remains in Appendix G to 40 C.F.R. 50. *See* Appendix G to 40 C.F.R. 50 (2012), at ¶ 5.1.1. For this reason, the Board has retained the incorporation by reference to Appendix B in 35 Ill. Adm. Code 243.108, noting the reference to this document in Appendix G to 40 C.F.R. 50.

***Appendix O: FRM for Coarse Particulate Matter ($PM_{10-2.5}$).*** USEPA once proposed, yet declined to adopt a NAAQS for coarse particulate matter ($PM_{10-2.5}$). *See* 71 Fed. Reg. 61144, 94 (Oct. 17, 2006); 71 Fed. Reg. 2620, 98 (Jan. 17, 2006) (proposing a 24-hour standard of 70 $\mu g/m^3$ as 40 C.F.R. 50.13(a)(2)(i)). USEPA, however, adopted the proposed FRM for $PM_{10-2.5}$ as Appendix O to 40 C.F.R. 50. *See* 71 Fed. Reg. 61144, 230 (Oct. 17, 2006) (NAAQS amendments); *see also* 71 Fed. Reg. 61236, 38 (Oct. 17, 2006) (accompanying amendments to 40 C.F.R. 53 and 58). USEPA explained as follows:

> An official FRM will be an important element in facilitating consistent research on $PM_{10-2.5}$ air quality and health effects and in promoting the commercial

> development of FEMs. In a separate final rule . . . [US]EPA is promulgating a requirement that States deploy about 60 FRM or FEM $PM_{10–2.5}$ monitors as part of a new National Core (NCore) multi-pollutant monitoring stations. 71 Fed. Reg. 61144, 212 (Oct. 17, 2006).

In accompanying amendments to the ambient air quality surveillance requirements, USEPA required all states to establish and operate at least one NCore[8] monitoring site. USEPA provided that Illinois would need to establish and operate one or two additional sites. *See* Appendix D to 40 C.F.R. 58 (2012), at ¶ 3(a); 71 Fed. Reg. 61236, 39 (Oct. 17, 2006). Monitoring for $PM_{10-2.5}$ is required at each NCore site. *See* 40 C.F.R. 58.12(f)(1) (2012); Appendix D to 40 C.F.R. 58 (2012), at ¶ 3(b); *see also* 40 C.F.R. 58.1 (2012) (definition of "NCore").

Further, Appendix Q to 40 C.F.R. 50 relies on Appendix O for description of the required sampler, sampling period, measurement procedures, etc. *See* Appendix Q to 40 C.F.R. 50 (2012), at ¶¶ 1.2 and 3.1. Appendix Q is considered in the following segment of this discussion, immediately below.

Thus, the NCore monitoring provisions sites and Appendix Q to 40 C.F.R. 50 rely on Appendix O to 40 C.F.R. 50. This is despite the fact that Appendix O is not part of an active NAAQS. For this reason, the Board has retained the incorporation by reference to Appendix O in 35 Ill. Adm. Code 243.108, noting the reference to this document in Appendix Q to 40 C.F.R. 50. The Board has also noted that this method is "for use in federally required monitoring by the NCore system pursuant to 40 CFR 58."

***Appendix Q: FRM for Lead in Particulate Matter ($PM_{10}$).*** USEPA once proposed revising the NAAQS for lead, which is lead in ultra-coarse particulate matter (Pb-PM) to lead in coarse particulate matter (Pb-$PM_{10}$). *See* 73 Fed. Reg. 66964, 88-89 (Nov. 12, 2008). USEPA retained the Pb-PM standard, but not the PB-PM standard because the data was insufficient to establish the relationship between Pb-$PM_{10}$ levels and health effects. *See id.* at 66991. USEPA, however, allowed limited use of Pb-$PM_{10}$ data to establish non-compliance (*see id.* at 67019) or to establish compliance where the levels of lead in the air are anticipated to be substantially below the standard and ultra-coarse particles are not expected (*see id.* at 66991). Thus, USEPA adopted the interpretation of the 2008 primary and secondary three-month average NAAQS for lead as Appendix R to 40 C.F.R. 50. Appendix R refers to the FRM for Pb-$PM_{10}$ in Appendix Q. *See* Appendix R to 40 C.F.R. 50 (2012), at ¶ 1(a); 73 Fed. Reg. at 67019-21.

The substantive reliance on Appendix Q in Appendix R to 40 C.F.R. 50 warrants inclusion of Appendix Q in the Illinois NAAQS rules. Appendix Q provides an alternative monitoring methodology for the 2008 NAAQS for lead. For this reason, the Board has retained the incorporation by reference to Appendix Q in 35 Ill. Adm. Code 243.108, noting the reference to this document in Appendix R to 40 C.F.R. 50.

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[8] Defined as the "National Core multipollutant monitoring stations" that monitor $PM_{2.5}$, speciated $PM_{2.5}$ $PM_{10-2.5}$, ozone, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, and basic weather data. 40 C.F.R. 58.1 (2012).

**Summary Tabulation of the NAAQS and Supporting Appendices.** The following tabulation lists all of the federal NAAQS, the codified FRM and any "interpretation" associated with each.

***NAAQS for Sulfur Oxides:***

NAAQS: 1971 primary annual average NAAQS for sulfur oxides
Citations: 40 C.F.R. 50.4(a)/35 Ill. Adm. Code 243.122(a)(1)
FRM specified: Appendix A-2 to 40 C.F.R. 50
Citations: 40 C.F.R. 50.4(c)/35 Ill. Adm. Code 243.122(a)(3)
Interpretation specified: None

NAAQS: 1971 primary 24-hour NAAQS for sulfur oxides
Citations: 40 C.F.R. 50.4(a)/35 Ill. Adm. Code 243.122(a)(1)
FRM specified: Appendix A-2 to 40 C.F.R. 50
Citations: 40 C.F.R. 50.4(c)/35 Ill. Adm. Code 243.122(a)(3)
Interpretation specified: None

NAAQS: 1971 secondary three-hour NAAQS for sulfur oxides
Citations: 40 C.F.R. 50.5(a)/35 Ill. Adm. Code 243.122(b)(1)
FRM specified: Appendix A-2 to 40 C.F.R. 50
Citations: 40 C.F.R. 50.5(b)/35 Ill. Adm. Code 243.122(b)(2)
Interpretation specified: None

NAAQS: 2010 primary one-hour NAAQS for sulfur oxides
Citations: 40 C.F.R. 50.17(a)/35 Ill. Adm. Code 243.122(c)(1)
FRM specified: Appendix A-1 or A-2 to 40 C.F.R. 50
Citations: 40 C.F.R. 50.17(c)/35 Ill. Adm. Code 243.122(c)(3)
Interpretation specified: Appendix T to 40 C.F.R. 50
Federal citation: 40 C.F.R. 50.17(b)/35 Ill. Adm. Code 243.122(c)(2)

***NAAQS for $PM_{10}$ and $PM_{2.5}$:***

NAAQS: 1987 primary and secondary 24-hour NAAQS for $PM_{10}$
Citations: 40 C.F.R. 50.6(a)/35 Ill. Adm. Code 243.120(a)(1)
FRM specified: Appendix J to 40 C.F.R. 50
Citations: 40 C.F.R. 50.6(c)(1)/35 Ill. Adm. Code 243.120(a)(3)(A)
Interpretation specified: Appendix K to 40 C.F.R. 50
Citations: 40 C.F.R. 50.6(a)/35 Ill. Adm. Code 243.120(a)(1)

NAAQS: 1997 primary and secondary annual average NAAQS for $PM_{2.5}$
Citations: 40 C.F.R. 50.7(a)/35 Ill. Adm. Code 243.120(b)(1)
FRM specified: Appendix L to 40 C.F.R. 50
Citations: 40 C.F.R. 50.7(a)(1)/35 Ill. Adm. Code 243.120(b)(1)(A)

Interpretation specified: Appendix N to 40 C.F.R. 50
Citations: 40 C.F.R. 50.7(b)/35 Ill. Adm. Code 243.120(b)(2)

NAAQS: 1997 primary and secondary 24-hour NAAQS for $PM_{2.5}$
Citations: 40 C.F.R. 50.7(a)/35 Ill. Adm. Code 243.120(b)(1)
FRM specified: Appendix L to 40 C.F.R. 50
Citations: 40 C.F.R. 50.7(a)(1)/35 Ill. Adm. Code 243.120(b)(1)(A)
Interpretation specified: Appendix N to 40 C.F.R. 50
Citations: 40 C.F.R. 50.7(b)/35 Ill. Adm. Code 243.120(b)(2)

NAAQS: 2006 primary and secondary annual average NAAQS for $PM_{2.5}$
Citations: 40 C.F.R. 50.13(a)/35 Ill. Adm. Code 243.120(c)(1)
FRM specified: Appendix L to 40 C.F.R. 50
Citations: 40 C.F.R. 50.13(a)(1)/35 Ill. Adm. Code 243.120(c)(1)(A)
Interpretation specified: Appendix N to 40 C.F.R. 50
Citations: 40 C.F.R. 50.13(b)/35 Ill. Adm. Code 243.120(c)(2)

NAAQS: 2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$
Citations: 40 C.F.R. 50.13(a)/35 Ill. Adm. Code 243.120(c)(1)
FRM specified: Appendix L to 40 C.F.R. 50
Citations: 40 C.F.R. 50.13(a)(1)/35 Ill. Adm. Code 243.120(c)(1)(A)
Interpretation specified: Appendix N to 40 C.F.R. 50
Citations: 40 C.F.R. 50.13(c)/35 Ill. Adm. Code 243.120(c)(3)

***NAAQS for Carbon Monoxide*:**

NAAQS: 1971 primary eight-hour NAAQS for carbon monoxide
Citations: 40 C.F.R. 50.8(a)(1)/35 Ill. Adm. Code 243.123(a)(1)
FRM specified: Appendix C to 40 C.F.R. 50
Citations: 40 C.F.R. 50.8(b)(1)/35 Ill. Adm. Code 243.123(b)(1)
Interpretation specified: None

NAAQS: 1971 primary one-hour NAAQS for carbon monoxide
Citations: 40 C.F.R. 50.8(a)(2)/35 Ill. Adm. Code 243.123(a)(2)
FRM specified: Appendix C to 40 C.F.R. 50
Citations: 40 C.F.R. 50.8(b)(1)/35 Ill. Adm. Code 243.123(b)(1)
Interpretation specified: None

***NAAQS for Ozone:***

NAAQS: 1979 primary and secondary one-hour NAAQS for ozone
Citations: 40 C.F.R. 50.9(a)/No corresponding Illinois provision
FRM specified: Appendix D to 40 C.F.R. 50
Citations: 40 C.F.R. 50.9(a)/No corresponding Illinois provision
Interpretation specified: Appendix H to 40 C.F.R. 50
Citations: 40 C.F.R. 50.9(a)/No corresponding Illinois provision

NAAQS: 1997 primary and secondary eight-hour NAAQS for ozone
Federal citation: 40 C.F.R. 50.10(a)/35 Ill. Adm. Code 243.125(a)(1)
FRM specified: Appendix D to 40 C.F.R. 50
Citations: 40 C.F.R. 50.10(a)/35 Ill. Adm. Code 243.125(a)(1)
Interpretation specified: Appendix I to 40 C.F.R. 50
Citations: 40 C.F.R. 50.10(b)/35 Ill. Adm. Code 243.125(a)(2)

NAAQS: 2008 primary and secondary eight-hour NAAQS for ozone
Federal citation: 40 C.F.R. 50.15(a)/35 Ill. Adm. Code 243.125(b)(1)
FRM specified: Appendix D to 40 C.F.R. 50
Citations: 40 C.F.R. 50.15(a)/35 Ill. Adm. Code 243.125(b)(1)
Interpretation specified: Appendix P to 40 C.F.R. 50
Citations: 40 C.F.R. 50.15(b)/35 Ill. Adm. Code 243.125(b)(2)

***NAAQS for Nitrogen Oxides:***

NAAQS: 1971 primary annual average NAAQS for nitrogen oxides
Citations: 40 C.F.R. 50.11(a)/35 Ill. Adm. Code 243.124(a)
FRM specified: Appendix F to 40 C.F.R. 50
Citations: 40 C.F.R. 50.11(d)(1)/35 Ill. Adm. Code 243.124(d)(1)
Interpretation specified: Appendix S to 40 C.F.R. 50
Citations: 40 C.F.R. 50.11(e)/35 Ill. Adm. Code 243.124(e)

NAAQS: 2010 primary one-hour NAAQS for nitrogen oxides
Citations: 40 C.F.R. 50.11(b)/35 Ill. Adm. Code 243.124(b)
FRM specified: Appendix F to 40 C.F.R. 50
Citations: 40 C.F.R. 50.11(d)(1)/35 Ill. Adm. Code 243.124(d)(1)
Interpretation specified: Appendix S to 40 C.F.R. 50
Citations: 40 C.F.R. 50.11(f)/35 Ill. Adm. Code 243.124(f)

NAAQS: 1971 secondary annual average NAAQS for nitrogen oxides
Citations: 40 C.F.R. 50.11(c)/35 Ill. Adm. Code 243.124(c)
FRM specified: Appendix F to 40 C.F.R. 50
Citations: 40 C.F.R. 50.11(d)(1)/35 Ill. Adm. Code 243.124(d)(1)
Interpretation specified: None

***NAAQS for Lead:***

NAAQS: 1978 primary and secondary quarterly average NAAQS for lead
Citations: 40 C.F.R. 50.12(a)/35 Ill. Adm. Code 243.126(a)(1)
FRM specified: Appendix G to 40 C.F.R. 50 (relying on Appendix B)
Citations: 40 C.F.R. 50.12(a)/35 Ill. Adm. Code 243.126(a)(1)
Interpretation specified: None

NAAQS: 2008 primary and secondary three-month average NAAQS for lead

| | |
|---|---|
| Citations: | 40 C.F.R. 50.16(a)/35 Ill. Adm. Code 243.126(b) |
| FRM specified: | Appendix G to 40 C.F.R. 50 (relying on Appendix B) |
| Citations: | 40 C.F.R. 50.16(a)(1)/35 Ill. Adm. Code 243.126(b)(1)(A) |
| Interpretation specified: | Appendix R to 40 C.F.R. 50 (relying on Appendix Q, which relies on Appendix O) |
| Citations: | 40 C.F.R. 50.16(b)/35 Ill. Adm. Code 243.126(b)(2) |

***Non-NAAQS Required Monitoring:***

Required by: NCore monitoring for $PM_{10-2.5}$

| | |
|---|---|
| Citation: | 40 C.F.R. 58.12(f)(1) |
| FRM specified: | Appendix O to 40 C.F.R. 50 |
| Citation: | Appendix D to 40 C.F.R. 58 (2012), at ¶ 3(b) |

**Summary re Incorporation of the FRMs, FEMs, and Interpretations.** Based on the foregoing, the Board has incorporated the three types of USEPA-designated monitoring methods in the following ways. All of the incorporations have been done by incorporations by reference, as described.

***Codified FRMs.*** The Board has incorporated by reference all of the appendices to 40 C.F.R. 50 that codify an FRM that is cited in an NAAQS. These appendices set forth the text of the method itself. These incorporations by reference directly involve each of the federal appendices. *See* 35 Ill. Adm. Code 243.108. At present, there are eight codified FRMs that directly support an NAAQS included in the appendices: Appendices A-1, A-2, C, D, F, G, J, and L to 40 C.F.R. 50.

***Non-Codified FRMs.*** The Board has incorporated by reference the listing of all of the non-codified FRMs, but not the FRMs themselves. These methods are identified in the List of Designated Methods, but the actual method is not set forth in full. Thus, the Board includes these non-codified methods in the Illinois regulations by incorporation by reference to the List of Designated Methods. *See* 35 Ill. Adm. Code 243.108. At present, there are 88 non-codified FRMs included in the List of Designated Methods: 16 for $PM_{10}$, 17 for $PM_{2.5}$, three for $PM_{10-2.5}$, nine for ozone, 20 for carbon monoxide, 26 for nitrogen oxides. None are listed for sulfur oxides and lead.

***Non-Codified FEMs.*** The Board has incorporated by reference the listing of all of the FEMs, all of which are non-codified. These methods are identified in the List of Designated Methods, in the same manner as are the non-codified FRMs, with the actual method not set forth in full. As for the non-codified FRMs, the Board includes the FEMs in the Illinois regulations by incorporation by reference to the List of Designated Methods. *See* 35 Ill. Adm. Code 243.108. At present, there are 127 FEMs included in the List of Designated Methods: 11 for $PM_{10}$, 17 for $PM_{2.5}$, 34 for sulfur oxides, 23 for ozone, five for nitrogen oxides, and 27 for lead. There are none for carbon monoxide.

***Interpretations.*** The Board has incorporated by reference all of the interpretations relative to the various NAAQS, all of which are codified as appendices to 40 C.F.R. 50. As for the codified FRMs, the Board includes the interpretations in the Illinois regulations by incorporation by reference of the various appendices. *See* 35 Ill. Adm. Code 243.108. At present, there are eight interpretations included in the appendices: Appendices H, I, K, N, P, R, S, and T to 40 C.F.R. 50.

***The Special-Case FRMs.*** The Board has incorporated by reference all of the special-case FRMs that do not directly relate to the NAAQS, all of which are codified as appendices to 40 C.F.R. 50. As for the codified FRMs that directly support the NAAQS, the Board includes the FRMs in the Illinois regulations by incorporation by reference of the various appendices. *See* 35 Ill. Adm. Code 243.108. At present, there are three special-case FRMs that do not directly support an NAAQS included in the appendices: Appendices B, O, and Q to 40 C.F.R. 50.

**Omission of Ancillary Federal Regulations in 40 C.F.R. 53, 58, and 81**

USEPA uses the procedures of 40 C.F.R. 53 to make FRM and FEM designations. *See* 40 C.F.R. 53.2, 53.3, and 53.8 (2012). Further, USEPA uses those rules to remove methods from the List of Designated Methods. *See* 40 C.F.R. 53.11 and 53.16 (2012). The Board does not read the mandate of Section 10(H) of the Act as requiring adoption of provisions from 40 C.F.R. 53. While the methods approved by USEPA pursuant to 40 C.F.R. 53 are vital to implementing the standards, only the methods themselves are specified within the text of the NAAQS. Since no NAAQS directly depends on any provision of 40 C.F.R. 53, the Board has entirely omitted the federal methods designations provisions from the Illinois NAAQS regulations.

The requirements of 40 C.F.R. 58 prescribe the requirements for establishing, operating, and maintaining monitoring networks and monitoring plans. *See* 40 C.F.R. 58.2 (2012). While these requirements are essential to implementation of the NAAQS, none of the NAAQS terms depend on any provision of the monitoring network rules. Further, as discussed above, the Board believes that these requirements are implemented in Illinois as a matter of federal law. Finally, USEPA did not cite 42 U.S.C. § 7409 as the basis for adoption of these rules. *See* 40 C.F.R. 58 (2012) (authority note); 415 ILCS 5/10(H), as added by P.A. 97-945, eff. Aug. 10, 2012. For these reasons, the Board entirely omitted the federal ambient air quality monitoring system requirements from the Illinois NAAQS regulations.

The federal definitions of air quality monitoring areas and attainment designations of these areas are codified in 40 C.F.R. 81. In particular, these federal rules define the boundaries of the "air quality control regions" (designated areas) in Illinois. *See* 40 C.F.R. 81.14 (Metropolitan Chicago), 81.18 (Metropolitan St. Louis), 81.69 (Paducah-Cairo Interstate), 81.71 (Rockford-Janesville-Beloit Interstate), 81.98 (Burlington-Keokuk Interstate), 81.101 (Metropolitan Dubuque), 81.102 (Metropolitan Quad Cities), 81.262 (North-Central Illinois Intrastate), 81.263 (East-Central Illinois Intrastate), 81.264 (West-Central Illinois Intrastate), and 81.265 (Southeast Illinois Intrastate) (2012). These regulations further codify USEPA's attainment designations for these designated areas. *See* 81.314 (2012).

Many transitional provisions in the federal NAAQS make applicability of NAAQS depend on the attainment status of the various designated areas in Illinois. *See* 40 C.F.R. 50.4(e) (2012) (the 1971 NAAQS for sulfur oxides), 50.9(a) (1997 one-hour NAAQS for ozone), 50.10(c) (1997 24-hour NAAQS for ozone), and 50.12(b) (the 1978 NAAQS for lead) (2102). Even though the applicability of these NAAQS directly rely on the federally codified area boundaries and attainment designations codified in 40 C.F.R. 81, the Board has not included any provision of these ancillary rules in the Illinois NAAQS rule.

The Board acknowledges the need to monitor future amendments to 40 C.F.R. 81 to determine the applicability of NAAQS. The Board has used 40 C.F.R. 81 to determine the applicability of NAAQS for two criteria contaminants: the 1971 primary 24-hour NAAQS for sulfur oxides and the 1979 primary calendar quarterly average NAAQS for lead. The Board foresees two possible modes for removal of obsolete NAAQS from the Illinois rules. The first is USEPA removal of the NAAQS from 40 C.F.R. 50. The second is when the NAAQS no longer applies to any area in this State. *See* 415 ILCS 5/7.2(a)(1) (2012). For this reason, the Board will monitor future amendments to 40 C.F.R. 81 with the same vigilance that the Board will use with regard to the NAAQS codified in 40 C.F.R. 50.

**Revisions to USEPA Definitions/Definitions Added**

The Board has incorporated the text of the federal definitions into the Illinois NAAQS rules. This has involved (1) replacing the former definition-related language of 35 Ill. Adm. Code 243.101 with a revised version of the preamble to 40 C.F.R. 50.1; (2) changing the meanings of a small number of core definitions to accommodate the context of the Illinois regulatory context, adding core definitions as necessary to accommodate those changed meanings; (3) revising several of the federal definitions; and (4) adding definitions to enhance the clarity of the rules. The following paragraphs broadly describe the revisions to the federal definitions. Table 1, details the revisions to the federal language.

**Shifted Meanings and Revisions to the Preamble.** The following bulleted segments describe the changed meanings for terms, the definitions added as a result, and the revisions to the preamble statement of the definitions provision.

- The Board changed the meaning of the term "Act" to mean the Environmental Protection Act (415 ILCS 5 (2012)), rather than the federal Clean Air Act (42 U.S.C. §§ 7401 *et seq.* (2011)). This change required adding a definition of "Clean Air Act," together with a defined abbreviation "CAA."[9]

- The Board shifted the meaning of the term "Agency" to mean the Illinois Environmental Protection Agency, rather than the U.S. Environmental Protection Agency. This shift required adding a definition of the abbreviation "USEPA."

[9] Adding this definition may not have been necessary, as the term "CAA" is used only in the "Scope" provision of 35 Ill. Adm. Code 243.102(a) (derived from 40 C.F.R. 50.2 (2012)), where the Board changed "Act" to "CAA" to retain the meaning of the statutory reference. Adding the definition of "CAA" maintains greater parity between the State and federal NAAQS rules.

- The Board added an affirmative statement of applicability of the definitions in the preamble. No such statement exists in 40 C.F.R. 50.1. Rather, the corresponding federal preamble states that the definition of a term given by the Clean Air Act applies to terms not defined in 40 C.F.R. 50.1.

- The Board retained the word "Act" in the language drawn from the federal preamble statement in 40 C.F.R. 50.1. The above-described shifted definition of "Act" would change the focus from definitions in the federal Clean Air Act to those of the Illinois Environmental Protection Act were the Board to retain the word "Act." Since the Board perceives that USEPA intended use of the Clean Air Act definitions, the Board has replaced "Act" with "CAA" in this statement. The Board further added a reference to the definitions of 35 Ill. Adm. Code 201.102, which are a segment of the general provisions pertinent to the Subtitle B: Air Pollution Control requirements.

**Changes in Defined Terms.** The Board has changed a limited number of the defined terms. The purposes for the changes are two-fold: (1) to standardize use of the term and conform the term to its use in the text; and (2) to enhance the clarity of the term. The following bulleted points describe the changed terms:

- The Board changed "exceedance with respect to a national ambient air quality standard" to "exceedance of a NAAQS" for enhanced clarity.

- The Board changed "equivalent method" to "federal equivalent method" and added the defined abbreviation "FEM" for consistent use in the text of the rules for the reasons previously explained in this opinion and order.

- The Board changed "reference method" to "federal reference method" and added the defined abbreviation "FRM" for consistent use in the text of the rules for the reasons previously explained in this opinion and order.

**Added Defined Terms.** The Board has added a limited number of defined terms. The purposes for the additions are two-fold: (1) to standardize use of the term in the text of the rules; and (2) to enhance the clarity of the text. The following bulleted points describe the added defined terms:

- The Board added a definition of the term "micrograms per cubic meter" and the defined abbreviation "$\mu g/m^3$" to enable the use of the defined abbreviation in 35 Ill. Adm. Code 243.124(c) and 243.126(b)(1) and (b)(2) (corresponding with 40 C.F.R. 50.6(a), 50.7(a), and 50.9(a) (2012)), based on the definition of the abbreviation in 40 C.F.R. 50.6(a) and 50.7(a) (2012).

- The Board added a definition of the term "milligrams per cubic meter" and the defined abbreviation "$mg/m^3$" to enable use of the defined abbreviation in 35 Ill. Adm. Code 243.124(a)(1) and (a)(2) (based on 40 C.F.R. 50.8(a)(1) and (a)(2) (2012)).

- The Board added a definition of "National Ambient Air Quality Standard" and the defined abbreviation "NAAQS" to enable use of the defined abbreviation in multiple locations throughout the text of 35 Ill. Adm. Code 243. The definition is based on the definition in "Terms of Environment: Glossary, Abbreviations, and Acronyms" (December 1997), EPA 175-B-97-001, at 30.

- The Board added a definition of the term "parts per billion" and the defined abbreviation "ppb" to enable use of the defined abbreviation in 35 Ill. Adm. Code 243.122(c)(1) and (c)(2); 243.124(a), (b), and (e); and appendix C to 35 Ill. Adm. Code 243 (2012) (based on 40 C.F.R. 50.15(a) (2012)).

- The Board added a definition of the term "parts per million" and the defined abbreviation "ppm" to enable use of the defined abbreviation in 35 Ill. Adm. Code 243.122(a)(1), (a)(2), (b)(1), and (b)(2); 243.123(a)(1), (a)(2), and (d); 243.124(c) and (g); and 243.125(a)(1), (b)(1), (b)(2), and (c)(2) and Appendix C to 35 Ill. Adm. Code 243 (based on 40 C.F.R. 50.4(a) and (b), 50.4(a) and (b); 50.8(a)(1), (a)(2), and (d); 50.9(a); 50.10(a) and (b); 50.11(g); 50.14(c); and 50.15(b) (2012)), based on the definition of the abbreviation in 40 C.F.R. 50.4(a) and (b), 50.8(d), ; and 50.17(a) (2012).

- The Board added a definition of the term "$PM_{10}$," based on the parenthetical definition in 40 C.F.R. 50.6(c), for the purposes of 35 Ill. Adm. Code 243.120(a) (corresponding with 40 C.F.R. 50.6 (2012)).

- The Board added a definition of the term "$PM_{2.5}$," based on the parenthetical definition in 40 C.F.R. 50.7(a), for the purposes of 35 Ill. Adm. Code 243.120(b) and (c) (corresponding with 40 C.F.R. 50.7 and 50.13 (2012)).

**Omitted Defined Terms.** The Board has omitted two of the federally defined terms. The purposes for the omissions are (1) to exclude a term that has no present operative effect in Illinois (*see* 415 ILCS 5/7.2(a)(1) (2012)); and (2) to omit a term that has been substituted in the text of the rules with another term. The following bulleted paragraphs describe the definitions omitted.

- The Board omitted the federal definition of "Indian country" from 40 C.F.R. 50.2(i), since no such area that falls within this definition exists in Illinois.

- The Board omitted the definition of "Administrator," since the term "USEPA" is substituted for this term throughout the text of the rules. *See* 35 Ill. Adm. Code 243.102 (definition of "exceptional event"; corresponding with 40 C.F.R. 50.1(j)) and 243.102(b) (corresponding with 40 C.F.R. 50.2(b)).

**USEPA Rules Added/State Provisions Removed**

The Board removed from the Illinois regulations the following provisions that have no current direct counterparts in the federal rules:

- Preamble (35 Ill. Adm. Code 243.102), which the Board has replaced with the statement of scope from 40 C.F.R. 50.2. The recitations of the existing preamble statement are similar in nature to those of the federal scope statement. Replacing the State preamble statement with the federal statement of scope minimizes the potential for conflicts between the Illinois and federal NAAQS requirements.

- Nondegradation (35 Ill. Adm. Code 243.104), which the Board has removed in its entirety. The federal rules include no direct counterpart to this requirement. Section 110 of the federal Clean Air Act (42 U.S.C. § 7410 (2011)), however, includes a requirement that a SIP must not interfere with requirements to prevent significant deterioration (PSD).[10] *See* 42 U.S.C. § 7410(a)(2)(D)(i)(II) and (a)(2)(J) (2011).

- Monitoring (35 Ill. Adm. Code 243.106), which the Board has removed in its entirety. The federal NAAQS rules include no direct counterpart to this requirement. Rather, 40 C.F.R. 58 sets forth the detailed requirements for air monitoring networks. As is discussed above, the Board has not included requirements from 40 C.F.R. 58 in this proceeding. The Board does not perceive those requirements to be part of the NAAQS, despite the important role the air monitoring network rules play in ensuring compliance with the NAAQS.

- Rule into Section Table and Section into Rule Table (Appendices A and B to 35 Ill. Adm. Code 243), which the Board has removed in their entirety. Those tables correlated the numbers of the original Illinois air pollution control rules relating to ambient air quality with the numbers of rules in the codified version, which arose in 1983. *See* 7 Ill. Reg. 13630 (Oct. 14, 1983). The Board sees no present need to maintain those listings.

The Board added the following provisions:

- Scope (35 Ill. Adm. Code 243.102), with which the Board replaced the former preamble statement, as described immediately above.

- Air Quality Monitoring Data Influenced by Exceptional Events (35 Ill. Adm. Code 243.105 and Table A to 35 Ill. Adm. Code 243), which the Board added to correspond with 40 C.F.R. 50.14 (2012) ("Treatment of air quality monitoring data influenced by exceptional events"). This provision sets forth the procedure for USEPA approval of excluding monitoring data that resulted from an exceptional event. Under the procedure, a state flags such data and requests that USEPA exclude that data. Upon an affirmative USEPA determination that the data were the result of an exceptional event, USEPA will exclude that data from the determination of compliance. *See* 40 C.F.R. 50.14 (2012). The procedure also includes a requirement for public notification of an event that is expected to result in exceedance of any NAAQS. *See* 40 C.F.R. 50.14(c)(1) (2012). The term "exceptional event" is defined in 40 C.F.R. 50.1(j) as follows:

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[10] Part C of the Clean Air Act includes the federal PSD requirements. *See* 42 U.S.C. § 7470-92 (2011).

> (j) *Exceptional event* means an event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by [USEPA] in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance. 40 C.F.R. 50.1(j) (2012); *see* (35 Ill. Adm. Code 243.101); *see also* 40 C.F.R. 50.1(k) (2012) (definition of "natural event").

Incorporating this provision into the Illinois NAAQS regulations required modification of the federal text. Principally, the Board modified the language to shift from first-person statements of what USEPA will do to third-person statements of what USEPA has said it will do. The Board also added topical sub-headings, "exceptional events," "fireworks displays," and "prescribed fires" for each of the categories of events considered by USEPA. *See* 35 Ill. Adm. Code 243.105(b)(1), (b)(2), and (b)(3). The Board further omitted expired federal provisions. *See* 35 Ill. Adm. Code 243.105(c)(2)(D), (c)(2)(E), (c)(3)(B), and (c)(3)(C).

Finally, the Board found it necessary to move the tabular material appended to 40 C.F.R. 50.14(c)(2)(vi) into a separate provision. The tabular material appears in new Table A to 35 Ill. Adm. Code 243. Inclusion of the tabular material at corresponding with 35 Ill. Adm. Code 243.105(c)(2)(F) would have required a two-inch left indent and extensive reorganization of the material. *See* 1 Ill. Adm. Code 100.340; Illinois Secretary of State, Index Department, Administrative Code Division, *Style Manual, Illinois Administrative Code and Illinois Register* (June 2004).[11]

The Board found it necessary to make minor revisions to the federal tabular material. First, the Board omitted federal footnotes "a" and "b" relating to federal effective dates from the text, since they would serve no function in the Illinois text. Second, the Board corrected the 2010 one-hour NAAQS for nitrogen oxides from "80-100 PPB, final level TBD" to "100 ppb" and the 2010 one-hour NAAQS for sulfur oxides to "75 ppb."[12] The Board added explanation of both alterations to the Board note appended to Table A to 35 Ill. Adm. Code 243.

**Incorporation of the NAAQS for the Six Criteria Pollutants**

In the following paragraphs, the Board considers the current status of the NAAQS associated with each of the six priority pollutants for which USEPA has established one or more

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[11] Available online at www.cyberdriveillinois.com/publications.

[12] This is an apparent error in final federal adoption. *Compare* 75 Fed. Reg. 35520, 92 (June 22, 2010) (adopted version) *with* 74 Fed. Reg. 64810, 69-70 (Dec. 8, 2009) (proposed version); *see* 75 Fed. Reg. at 35586; 74 Fed. Reg. at 64858 (the table as it appeared in the preamble discussions). The 2010 one-hour NAAQS for nitrogen oxides was pending simultaneous with the 2010 NAAQS for sulfur oxides. *See* 75 Fed. Reg. 6474 (Feb. 9, 2010) (adoption of 2010 NAAQS for nitrogen oxides).

NAAQS: carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides.[13] Each segment of discussion examines the historical development of the NAAQS for the particular pollutant, each notes the NAAQS that remain in 40 C.F.R. 50 for that pollutant, and each explains the Board's approach to each of the NAAQS.

**Section 243.120: Particulate Matter.** USEPA has had three different types of standards for particulate matter, which have depended on the size of the particulates to be monitored. The initial standard was for total suspended particulates (TSP), which gauged the total amount of particulates in the ambient air. USEPA then used what has now been called "$PM_{10}$," which are the particulates in air having an aerodynamic diameter of 10 microns or less. *See* 40 C.F.R. 50.6(c) (2012). More recently, USEPA has used "$PM_{2.5}$," which is also called "fine particulates": those having an aerodynamic diameter of 2.5 microns or less. *See* 40 C.F.R. 50.7(a) (2012). The following table summarizes the development of the NAAQS for particulate matter (indicating currently codified standards in bold):

1971 Primary Annual Average NAAQS for Total Suspended Particulates (TSP) (Removed)

Standard: 75 µg/m$^3$ annual geometric mean
Citation: 40 C.F.R. 50.6(a) (1986) (originally 42 C.F.R. 410.6(a) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.
November 25, 1971 (36 Fed. Reg. 22384): Recodified without substantive revision.
July 1, 1987 (52 Fed. Reg. 24634): Removed.

1971 Primary 24-Hour NAAQS for Total Suspended Particulates (TSP) (Removed)

Standard: 260 µg/m$^3$ not to be exceeded more than once in a year
Citation: 40 C.F.R. 50.6(b) (1986) (originally 42 C.F.R. 410.6(b) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.
November 25, 1971 (36 Fed. Reg. 22384): Recodified without substantive revision.
July 1, 1987 (52 Fed. Reg. 24634): Removed.

1971 Secondary Annual Average NAAQS for Total Suspended Particulates (TSP) (Removed)

Standard: 60 µg/m$^3$ used for assessing implementation plans achieving the 1971 secondary 24-hour standard
Citation: 40 C.F.R. 50.7(a) (1986) (originally 42 C.F.R. 410.7(a) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.

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[13] USEPA adopted primary and secondary NAAQS for hydrocarbons in 1971. *See* 40 C.F.R. 50.10 (1972); 36 Fed. Reg. 8186 (Apr. 30, 1971) (originally codified as 42 C.F.R. 410.10); *see also* 36 Fed. Reg. 22369, 84 (Nov. 25, 1971) (recodified to 40 C.F.R. 50.10). USEPA removed the NAAQS for hydrocarbons in 1982. *See* 48 Fed. Reg. 628, 29 (January 5, 1983).

November 25, 1971 (36 Fed. Reg. 22384): Recodified without substantive revision.
July 1, 1987 (52 Fed. Reg. 24634): Removed.

1971 Secondary 24-Hour NAAQS for Total Suspended Particulates (TSP) (Removed)

Standard: 150 µg/$m^3$ not to be exceeded more than once in a year
Citation: 40 C.F.R. 50.7(b) (1986) (originally 42 C.F.R. 410.7(b) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.
November 25, 1971 (36 Fed. Reg. 22384): Recodified without substantive revision.
July 1, 1987 (52 Fed. Reg. 24634): Removed.

**1987 Primary and Secondary 24-Hour NAAQS for $PM_{10}$ (Current)**

Standard: 150 µg/$m^3$ not to be exceeded more than once per year, on a three-year average basis
Citation: 40 C.F.R. 50.6(a) (2012)

July 1, 1987 (52 Fed. Reg. 24634): Original adoption.
July 18, 1997 (62 Fed. Reg. 38652): Sunset provision added.[14]
December 22, 2000 (65 Fed. Reg. 80776): Sunset provision removed[15]

1987 Primary and Secondary Annual Average NAAQS for $PM_{10}$ (Removed)

Standard: 50 µg/$m^3$ annual arithmetic mean on a three-year average basis
Citation: 40 C.F.R. 50.6(b) (2006)

July 1, 1987 (52 Fed. Reg. 24634): Original adoption.
July 18, 1997 (62 Fed. Reg. 38652): Sunset provision added.[16]
December 22, 2000 (65 Fed. Reg. 80779): Sunset provision removed[17]
October 17, 2006 (71 Fed. Reg. 61144): Removed.

1997 Primary and Secondary Annual Average NAAQS for $PM_{10}$ (Removed)

Standard: 50 µg/$m^3$ annual arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.7(a)(2) (1998)

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[14] Not described in this summary outline because USEPA subsequently removed the sunset provision. *See* 40 C.F.R. 50.6(d) (1998) (the removed sunset provision).

[15] As a result of the decision in American Trucking Assoc. v. EPA, 175 F. 2d 1027, *modified en banc*, 195 F.3d 4 (D.C. Cir. 1999), *aff'd in part and rev'd in part sub nom* Whitman v. American Trucking Assoc., 531 U.S. 457, 121 S. Ct. 903, 149 L. Ed. 2d 69 (2001), *on remand*, 283 F.3d 355 (D.C. Cir. 2002).

[16] *See supra* note 14.

[17] *See supra* note 15.

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Removed.

1997 Primary and Secondary 24-Hour NAAQS for $PM_{10}$ (Removed)

Standard: 150 $\mu g/m^3$ 99th percentile, averaged over three years
Citation: 40 C.F.R. 50.7(a)(2) (1998)

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Removed.

**1997 Primary and Secondary Annual Average NAAQS for $PM_{2.5}$ (Current)**
Standard: 15.0 $\mu g/m^3$ arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.7(a) (2012) (originally 40 C.F.R. 50.7(a)(1) (1998))

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Renumbered to subsection (a).

**1997 Primary and Secondary 24-Hour NAAQS for $PM_{2.5}$ (Current)**
Standard: 65 $\mu g/m^3$ 98th percentile, averaged over three years
Citation: 40 C.F.R. 50.7(a) (2012) (originally 40 C.F.R. 50.7(a)(1) (1998))

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Renumbered to subsection (a).

**2006 Primary and Secondary Annual Average NAAQS for $PM_{2.5}$ (Current)**
Standard: 15.0 $\mu g/m^3$ arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.13(a) (2012)

October 17, 2006 (71 Fed. Reg. 61144): Original adoption.

**2006 Primary and Secondary 24-Hour NAAQS for $PM_{2.5}$ (Current)**
Standard: 35 $\mu g/m^3$ 98th percentile, averaged over three years
Citation: 40 C.F.R. 50.13(a) (2012)

October 17, 2006 (71 Fed. Reg. 61144): Original adoption.

Five primary and secondary NAAQS for particulate matter remain codified in three federal rules: 40 C.F.R. 50.6, 50.7, and 50.13. There remains one standard for $PM_{10}$ and four for $PM_{2.5}$.[18] The Board has codified these five standards in 35 Ill. Adm. Code 243.120. The Board has replaced this particulate matter provision with the text of the five federal NAAQS. Each of

[18] USEPA proposed and declined to adopt a standard for coarse particulate matter ($PM_{10-2.5}$). See the discussion that appears at page 20 of this opinion and order.

the federal particulate matter provisions appears in a separate subsection, one for each of the 1987, 1997, and 2006 standards. The five NAAQS are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.120(a) | 40 C.F.R. 50.6 | 1987 primary and secondary 24-hour NAAQS for $PM_{10}$ |
| 243.120(b) | 40 C.F.R. 50.7 | 1997 primary and secondary annual average NAAQS for $PM_{2.5}$<br>1997 primary and secondary 24-hour NAAQS for $PM_{2.5}$ |
| 243.120(c) | 40 C.F.R. 50.13 | 2006 primary and secondary annual average NAAQS for $PM_{2.5}$<br>2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$ |

The Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for particulate matter.

The Board has codified the federal NAAQS for particulate matter without substantive revision. All of the deviations from the literal text of the federal NAAQS are itemized in Table 1. The Board discusses here one addition to the federal text: the addition of explanation in the Board notes to the 1987 and 1997 standards.

The explanation appended to the 1987 NAAQS for $PM_{10}$ outlines how USEPA added a sunset clause to the 1987 $PM_{10}$ standards when adopting a revised 1997 standard for $PM_{10}$ and the 1997 NAAQS for $PM_{2.5}$. *See* 62 Fed. Reg. 38652, 701 (July 18, 1997). The sunset provision stated that the 1987 standards would not apply to an area designated non-attainment with the 1987 standards once USEPA has established rules for non-attainment areas as required by section 172(e) of the Clean Air Act (42 U.S.C. § 7502(e) (2011). The sunset provision further stated that the 1987 standards would not apply to an area that had attained those standards after USEPA has approved a SIP for that area relative to the new 1997 standards. *See* 40 C.F.R. 50.6(d) (1998).

USEPA later removed the 1997 NAAQS for $PM_{10}$ and the sunset provision from the 1987 standard as a result of decision in American Trucking Assoc. v. EPA, 175 F. 2d 1027, *modified en banc*, 195 F.3d 4 (D.C. Cir. 1999), *aff'd in part and rev'd in part*, *sub nom* Whitman v. American Trucking Assoc., 531 U.S. 457, 121 S. Ct. 903, 149 L. Ed. 2d 69 (2001), *on remand*, 283 F.3d 355 (D.C. Cir. 2002). *See* 69 Fed. Reg. 45592 (July 30, 2004); 65 Fed. Reg. 80776, 77

(Dec. 22, 2000). As a result, the 1987 primary and secondary 24-hour NAAQS for $PM_{10}$ continues to apply.[19] *See* 65 Fed. Reg. 80776, 77 (Dec. 22, 2000).

The Board has included the 1987 standard for $PM_{10}$. The explanation that the Board appended to the 1987 standards explains Board retention of the 1987 standards. The Board has not included the 1997 NAAQS for $PM_{10}$ in the Illinois regulations.

The Board has retained the 1997 NAAQS for $PM_{2.5}$ because USEPA has done so. The 2006 primary and secondary annual average NAAQS for $PM_{2.5}$ is nearly the same as the 1997 annual average standard.[20] On the other hand, the 2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$ is more stringent than the 1997 24-hour standard. *Compare* 40 C.F.R. 50.7(a) (2012) (1997 standard) *with* 40 C.F.R. 50.13 (2012) (2006 standard); *see* 71 Fed. Reg. 61144, 45, 64 (Oct. 17, 2006). Further, it appears that the 1997 standards for $PM_{2.5}$ may have continuing vitality for implementation of various federal ambient air quality rules. *See* 71 Fed. Reg. 61144, 49 (Oct. 17, 2006). The explanation appended to the 1997 NAAQS for $PM_{2.5}$ outlines USEPA's addition of the 2006 annual average and 24-hour NAAQS for $PM_{2.5}$ and Board retention of the 1997 standard.

**Section 243.122: Sulfur Oxides.** USEPA has maintained primary and secondary NAAQS for sulfur oxides since 1971. The following table summarizes the development of the NAAQS for sulfur oxides (indicating currently codified standards in bold):

**1971 Primary Annual Average NAAQS for Sulfur Oxides (as $SO_2$) (Subject to Sunset)**

Standard: 0.030 ppm annual arithmetic mean
Citation: 40 C.F.R. 50.4(a) (2012) (originally 42 C.F.R. 410.4(a) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 80 µg/$m^3$ (0.03 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
April 21, 1993 (58 Fed. Reg. 21351): Retained without revision.
May 22, 1996 (61 Fed. Reg. 25566): Immaterial change to 0.030 ppm (significant digit added, metric units removed).
June 22, 2010 (75 Fed. Reg. 35520): Sunset provision added: the standard does not apply to an area one year after USEPA designation of the attainment status of that area under the 2010 primary one-hour standard, with exceptions.

**1971 Primary 24-Hour NAAQS for Sulfur Oxides (as $SO_2$) (Subject to Sunset)**

Standard: 0.14 ppm not to be exceeded more than once per year

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[19] USEPA retained the 24-hour 1987 NAAQS and removed the annual average 1987 NAAQS in 2006. *See* 71 Fed. Reg. 61144 (Oct. 17, 2006).

[20] USEPA kept the numerical standard the same, but revised the monitoring and data handling conventions for determining compliance. *See* 71 Fed. Reg. 61144, 77, 210-11 (Oct. 17, 2006).

Citation: 40 C.F.R. 50.4(b) (2012) (originally 42 C.F.R. 410.4(b) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 365 $\mu g/m^3$ (0.14 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
April 21, 1993 (58 Fed. Reg. 21351): Retained without revision.
May 22, 1996 (61 Fed. Reg. 25566): Immaterial change to 0.14 ppm (metric units removed).
June 22, 2010 (75 Fed. Reg. 35520): Sunset provision added: the standard does not apply to an area one year after USEPA designation of the attainment status of that area under the 2010 primary one-hour standard, with exceptions.

1971 Secondary Annual Average NAAQS for Sulfur Oxides (as $SO_2$) (Revoked)

Standard: 60 $\mu g/m^3$ (0.02 ppm) annual arithmetic mean
Citation: 40 C.F.R. 50.5(a) (1972) (originally 42 C.F.R. 410.5(a) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
September 14, 1973 (36 Fed. Reg. 25678): Revoked.

1971 Secondary 24-Hour NAAQS for Sulfur Oxides (as $SO_2$) (Revoked)

Standard: 260 $\mu g/m^3$ (0.1 ppm) not to be exceeded more than once per year
Citation: 40 C.F.R. 50.5(b) (1972) (originally 42 C.F.R. 410.5(b) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption.
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
September 14, 1973 (36 Fed. Reg. 25678): Revoked.

**1971 Secondary Three-Hour NAAQS for Sulfur Oxides (as $SO_2$) (Current)**

Standard: 0.5 ppm not to be exceeded more than once per year
Citation: 40 C.F.R. 50.5 (2012) (originally 42 C.F.R. 410.5(c) (1971), then 40 C.F.R. 50.5(c) (1972))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 1300 $\mu g/m^3$ (0.5 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
September 14, 1973 (36 Fed. Reg. 25678): Renumbered.
May 22, 1996 (61 Fed. Reg. 25566): Immaterial change to 0.5 ppm (metric units removed).

**2010 Primary One-Hour NAAQS for Sulfur Oxides (as $SO_2$) (Current)**

Standard: 75 ppb 99th percentile, averaged over three years
Citation: 40 C.F.R. 50.17(a) (2012) (originally 42 C.F.R. 410.4(a) (1971))

June 22, 2010 (75 Fed. Reg. 35520): Original adoption.

Three primary and one secondary NAAQS for sulfur oxides remain codified in three federal rules: 40 C.F.R. 50.4, 50.5, and 50.17. The Board has codified these four standards in 35 Ill. Adm. Code 243.122. The Board has replaced the existing sulfur oxides provision with the text of the federal NAAQS. Each of the federal sulfur oxides provisions appears in a separate subsection. The four NAAQS for sulfur oxides are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.122(a)(1) | 40 C.F.R. 50.4(a) | 1971 primary annual average NAAQS for sulfur oxides |
| 243.122(a)(2) | 40 C.F.R. 50.4(b) | 1971 primary 24-hour NAAQS for sulfur oxides |
| 243.122(b) | 40 C.F.R. 50.5 | 1971 secondary three-hour NAAQS for sulfur oxides |
| 243.122(c) | 40 C.F.R. 50.17 | 2010 primary one-hour NAAQS for sulfur oxides |

As previously discussed, the Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for sulfur oxides.

The Board has codified the federal NAAQS for sulfur oxides without substantive revision. All of the deviations from the literal text of the federal NAAQS are itemized in Table 1. The Board discusses here only one issue relative to the federal NAAQS for sulfur oxides: USEPA addition of a sunset provision to the 1971 primary annual average and 24-hour NAAQS for sulfur oxides with adoption of the 2010 primary NAAQS for sulfur oxides.

***Sunset Clause for the 1971 Primary 24-Hour NAAQS for Sulfur Oxides.*** Upon adoption of the 2010 primary one-hour NAAQS for sulfur oxides, USEPA added the following sunset clause:

> The [1971 primary annual average and 24-hour] standards [for sulfur oxides] set forth in this section will remain applicable to all areas notwithstanding the promulgation of [the 2010] $SO_2$ [primary] national ambient air quality standards (NAAQS) [for sulfur oxides] in § 50.17. The [1971 primary annual average and 24-hour] $SO_2$ NAAQS set forth in this section will no longer apply to an area one year after the effective date of the designation of that area, pursuant to section 107 of the Clean Air Act, for the [2010] $SO_2$ NAAQS set forth in § 50.17; except that for areas designated nonattainment for the [1971 primary annual average and 24-hour] $SO_2$ NAAQS set forth in this section as of the effective date of § 50.17, and areas not meeting the requirements of a SIP call with respect to requirements for

> the [1971 primary annual average and 24-hour] $SO_2$ NAAQS set forth in this section, the [1971 primary annual average and 24-hour] $SO_2$ NAAQS set forth in this section will apply until that area submits, pursuant to section 191 of the Clean Air Act [42 U.S.C. § 7514], and EPA approves, an implementation plan providing for attainment of the [2010] $SO_2$ NAAQS set forth in § 50.17. 40 C.F.R. 50.4(e) (2012); 75 Fed. Reg. 35520, 92 (June 22, 2010).

The Board sees various alternatives for codifying this provision. One basic change would apply to all of the alternatives: changing "the effective date of § 50.17" to "August 23, 2010." See 75 Fed. Reg. 35520 (June 22, 2010). Application of other segments of this sunset provision to areas of Illinois is more problematic.

The Board cannot definitively determine whether the 1971 primary annual average and 24-hour NAAQS for sulfur oxides apply to any area of the State. Although the federal regulations make it clear that USEPA had not designated any area in Illinois as non-attainment as of August 23, 2010 (*see* 40 CFR 81.314 (2010)), the federal regulations do not make it clear that no area was "not meeting the requirements of a SIP call with respect to requirements for the [1971 primary annual average and 24-hour] $SO_2$ NAAQS" as of that date (*see* 40 C.F.R. 52.720, 52,722, and 52.724 (2012)). The Board was able to determine that USEPA had not made any attainment determinations with regard to the 2010 primary one-hour NAAQS for sulfur oxides as of December 31, 2012. *See* 40 C.F.R 81.314 (2012); *List of Sections Affected* (December 2012), at 82; 77 Fed. Reg. 48062, 71 (Aug. 13, 2012) (pertaining only to ozone). It is apparent, however, that the Agency has recommended area designations for Illinois to USEPA. *See* letter of June 2, 2011 from Laurel Kroack, Chief, Bureau of Air, Agency, to Cheryl A. Newton, Director, Office of the Air and Radiation Division, USEPA Region 5 (available at http://www.epa.gov/so2designations/recletters/R5_IL_rec_wtechanalysis.pdf).

After USEPA has made area designations under the 2010 one-hour NAAQS for sulfur oxides for each area of Illinois, and after USEPA has approved an implementation plan for attainment for each area of Illinois, the 1971 primary NAAQS for sulfur oxides will become obsolete as to Illinois. Until that time, the Board must maintain a provision to correspond with the sunset provision of 40 C.F.R. 50.4(e) at 35 Ill. Adm. Code 243.122(a)(5). The Board outlines five options and selects one in the following paragraphs.

***Option 1: Retain the Entire Federal Text with Minimal Deviation.*** The first option is for the Board to retain the entire text of 40 C.F.R. 50.4(e) with minimal deviation. In addition to the routine clarifying revisions, this alternative reorganizes the material by moving the two exception statements of areas where the 1971 primary annual average and 24-hour NAAQS will continue to apply into subsidiary subsections. This first option would add an explanatory Board note to the text. This first option would appear as follows:

> 5) The 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) remain applicable to all areas notwithstanding the promulgation of the 2010 primary one-hour NAAQS for sulfur oxides in subsection (c) of this Section. The 1971 primary annual average and 24-hour NAAQS for sulfur oxides 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 2010 primary one-hour NAAQS for sulfur oxides set forth in subsection (c) of this Section; except that the 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) will apply until USEPA has approved an implementation plan for that area pursuant to 42 USC 7514 for attainment of the 2010 primary one-hour NAAQS for sulfur oxides set forth in subsection (c) of this Section for the following areas:

A) Areas that USEPA has designated nonattainment for the 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) as of August 23, 2010; and

B) Areas that had not met the requirements of USEPA a SIP call with respect to requirements for the 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a).

BOARD NOTE: The Board substituted "August 23, 2010" for the open-ended language in corresponding 40 CFR 50.4(e) relative to the effective date of 40 CFR 50.17. August 23, 2010 is the effective date recited at 75 Fed. Reg. 35520 (June 22, 2010). The Agency recommended that USEPA designate limited areas of Illinois as non-attainment with the 2010 primary one-hour NAAQS for sulfur oxides. See letter of June 2, 2011 from Laurel Kroack, Chief, Bureau of Air, Agency, to Cheryl A. Newton, Director, Office of the Air and Radiation Division, USEPA Region 5 (available at http://www.epa.gov/so2designations/recletters/R5_IL_rec_wtechanalysis.pdf). USEPA had not designated any area of Illinois for the 2010 primary one-hour NAAQS for sulfur oxides as of December 31, 2012. See 40 CFR 81.314 (area designations in Illinois). When the conditions of this subsection (a)(5) have been fulfilled, or USEPA has removed 40 CFR 50.4, the Board will remove the standard of this subsection (a) as obsolete.

***Option 2: Replace the Statement of Inapplicability and Delete One Exception Statement.*** The second option is for the Board to retain the text of 40 C.F.R. 50.4(e) that states the continued applicability of the 1971 primary annual average and 24-hour NAAQS for sulfur oxides. This option, however, would replace the two conditional statements. First, a statement that the Board will remove the 1971 NAAQS when the conditions of 40 C.F.R. 50.4(e) have been fulfilled would replace the federal statement when the 1971 primary NAAQS will no longer apply. Second, this option would delete the exception statement relative to areas designated as non-attainment with the 1971 standards. This second option would add the same explanatory Board note to the text as would the first option. This second option would appear as follows (with the Board note omitted):

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 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) pursuant to 42 USC 7407 for the 2010 primary one-hour NAAQS for sulfur oxides set forth in subsection (c) of this Section; except that the 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) will apply until USEPA has approved an implementation plan for that area pursuant to 42 USC 7514 for attainment of the 2010 primary one-hour NAAQS for sulfur oxides set forth in subsection (c) of this Section.

***Option 3: Replace the Statement of Inapplicability with a Statement That the Board Will Remove the 1971 NAAQS When Conditions Are Fulfilled.*** The third option is for the Board to replace the text of 40 C.F.R. 50.4(e) with a statement that Board will remove the 1971 primary annual average and 24-hour NAAQS for sulfur oxides after fulfillment of the conditions recited in 40 C.F.R. 50.4(e). This option would describe when the 1971 NAAQS no longer apply and the two associated conditional statements in an appended Board note. This third option would appear as follows:

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 sulfur oxides remains effective in two types of areas for which USEPA has not yet approved 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. As of December 31, 2012, USEPA had not yet designated the attainment status of areas in Illinois. See 40 CFR 81.314 (2012). The Agency recommended that USEPA designate limited areas of Illinois as non-attainment with the 2010 primary one-hour NAAQS. See letter of June 2, 2011 from Laurel Kroack, Chief, Bureau of Air, Agency, to Cheryl A. Newton, Director, Office of the Air and Radiation Division, USEPA Region 5 (available at http://www.epa.gov/so2designations/recletters/R5_IL_rec_wtechanalysis.pdf). When the conditions of this subsection (a)(5) have been fulfilled, or USEPA has removed 40 CFR 50.4, the Board will remove the standard of this subsection (a) as obsolete.

***Option 4: Replace the Statement of Inapplicability with a Statement That the Board Will Remove the 1971 NAAQS When USEPA Makes Area Designations Under the 2010 One***

***Hour NAAQS or Removes the 1971 NAAQS.*** The fourth option is a variation of the third option. This fourth option is for the Board to replace the text of 40 C.F.R. 50.4(e) with a statement that Board will remove the 1971 primary annual average and 24-hour NAAQS for sulfur oxides after USEPA has made areas designations for all areas in Illinois under the 2010 primary one-hour NAAQS for sulfur oxides or after USEPA has removed the standard of 40 C.F.R. 50.4. This option would describe when the 1971 NAAQS no longer apply and the two associated conditional statements in an appended Board note. This second option would add the same explanatory Board note to the text as would the third option. This fourth option would appear as follows (with the Board note omitted):

5) The 1971 primary annual average and 24-hour NAAQS for sulfur oxides set forth in this subsection (a) remain 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 USEPA has made attainment designations with regard to all areas in Illinois under the 2010 primary one-hour NAAQS for sulfur oxides or USEPA has removed the existing standard of 40 CFR 50.4.

***Option 5: Remove the Sunset Provision in Its Entirety.*** The fifth option would involve removing the sunset clause in its entirety. The sunset provision operates to eclipse the 1971 primary NAAQS as a matter of federal law. When it is clear that all of the conditions have been fulfilled, or if USEPA removes 40 C.F.R. 50.4, the Board can simply remove 35 Ill. Adm. Code 243.122(a). The omission of the sunset clause in its entirety does not affect the fact that Board removal of subsection (a) will be required to remove the 1971 primary annual average and 24-hour NAAQS from the Illinois regulations.

***Selection of Option 3.*** The Board has adopted the third option described above and replaces the conditioned statement of inapplicability of 40 C.F.R. 50.4(e) with a statement that the Board will remove the 1971 primary NAAQS after fulfillment of the federal conditions. Option 3 preserves the statement of applicability. Option 3 is consistent with the Board's identical-in-substance rulemaking practice to maintain a provision until the Board removes it. Option 3 avoids the convoluted conditional statement and its exceptions. Whether the conditions are fulfilled is best determined between USEPA and the Agency.

The Board has requested that the Agency inform the Board in the future should USEPA determine that the 1971 primary NAAQS for sulfur oxides do not apply to any area of Illinois. The Agency stated at hearing that the USEPA area designations are now overdue. Tr. at 10-11. The Board can list areas of inapplicability in future updates to the NAAQS and ultimately remove 35 Ill. Adm. Code 243.122(a) when the 1971 Standards no longer apply to any area of the State.

**Section 243.123: Carbon Monoxide.** USEPA adopted primary and secondary NAAQS for sulfur oxides in 1971. *See* 36 Fed. Reg. 8186 (Apr. 30, 1971). Each of the primary and secondary NAAQS included two standards: an eight-hour standard and a 24-hour standard.

Today, only the primary standards remain. The evolution of the federal NAAQS for carbon monoxide is outlined as follows (indicating the currently codified standards in bold):

**1971 Primary Eight-Hour NAAQS for Carbon Monoxide (Current)**

Standard: 9 ppm (10 mg/$m^3$) not to be exceeded more than once per year
Citation: 40 C.F.R. 50.8(a)(1) (2012) (originally 42 C.F.R. 410.8(a) (1971), then 40 C.F.R. 50.8(a) (1972))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 10 mg/$m^3$ (9 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 22384): Recodified without substantive revision.
February 18, 1975 (40 Fed. Reg. 7042): Amended to require the use of federally approved monitoring methods (FRMs and FEMs).
September 13, 1985 (50 Fed. Reg. 37484): Immaterial change to 9 ppm (10 µg/$m^3$), renumbered to subsection (a)(1).
August 1, 1994 (59 Fed. Reg. 38906): Retained without revision.
August 31, 2011 (76 Fed. Reg. 54294): Retained without revision.

1971 Secondary Eight-Hour NAAQS for Carbon Monoxide (Revoked)

Standard: 9 ppm (10 mg/$m^3$) not to be exceeded more than once per year
Citation: 40 C.F.R. 50.8(a) (1985) (originally 42 C.F.R. 410.8(a) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 40 mg/$m^3$ (35 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
February 18, 1975 (40 Fed. Reg. 7042): Amended to require the use of federally approved monitoring methods (FRMs and FEMs).
September 13, 1985 (50 Fed. Reg. 37484): Revoked.

**1971 Primary One-Hour NAAQS for Carbon Monoxide (Current)**

Standard: 35 ppm (40 mg/$m^3$) not to be exceeded more than once per year
Citation: 40 C.F.R. 50.8(a)(2) (2012) (originally 42 C.F.R. 410.8(b) (1971), then 40 C.F.R. 50.8(b) (1972))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 10 mg/$m^3$ (9 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 22384): Recodified without substantive revision.
February 18, 1975 (40 Fed. Reg. 7042): Amended to require the use of federally approved monitoring methods (FRMs and FEMs).
September 13, 1985 (50 Fed. Reg. 37484): Immaterial change to 9 ppm (10 µg/$m^3$), renumbered to subsection (a)(2).
August 1, 1994 (59 Fed. Reg. 38906): Retained without revision.
August 31, 2011 (76 Fed. Reg. 54294): Retained without revision.

1971 Secondary One-Hour NAAQS for Carbon Monoxide (Revoked)

Standard: 35 ppm (40 mg/$m^3$) not to be exceeded more than once per year

Citation: 40 C.F.R. 50.8(b) (2012) (originally 42 C.F.R. 410.8(b) (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 40 $mg/m^3$ (35 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 22384): Recodified without substantive revision.
February 18, 1975 (40 Fed. Reg. 7042): Amended to require the use of federally approved monitoring methods (FRMs and FEMs).
September 13, 1985 (50 Fed. Reg. 37484): Revoked.

Two primary NAAQS for carbon monoxide remain codified in one federal regulation: 40 C.F.R. 50.8. These are a one-hour NAAQS and an eight-hour NAAQS. The Board has codified the two standards in 35 Ill. Adm. Code 243.123. The Board has replaced the existing provision relative to carbon monoxide with the text of the federal NAAQS. The single federal provision relative to carbon monoxide appears in a single subsection of the Illinois rules. The two NAAQS are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.123(a)(1) | 40 C.F.R. 50.8(a)(1) | 1971 primary eight-hour NAAQS for carbon monoxide |
| 243.123(b)(2) | 40 C.F.R. 50.8(a)(2) | 1971 primary one-hour NAAQS for carbon monoxide |

The Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for carbon monoxide in the initial portion of this discussion.

The Board has codified the federal NAAQS for carbon monoxide without substantive revision. All of the deviations from the literal text of the federal NAAQS are itemized in Table 1.

**Section 243.124: Nitrogen Oxides.** USEPA adopted primary and secondary annual average NAAQS for nitrogen oxides in 1971. *See* 36 Fed. Reg. 46246 (Oct. 5, 1978). USEPA recently adopted a 2010 primary one-hour NAAQS for nitrogen oxides. The evolution of the NAAQS for nitrogen oxides was as follows (indicating all of the standards as currently codified in bold):

**1971 Primary Annual Average NAAQS for Nitrogen Oxides (as $NO_2$) (Current)**
Standard: 0.053 ppm (100 $\mu g/m^3$) annual arithmetic mean
Citation: 40 C.F.R. 50.11(a) (2012) (originally 42 C.F.R. 410.11 (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 100 $\mu g/m^3$ (0.05 ppm).

November 25, 1971 (36 Fed. Reg. 22369, 22384): Recodified without substantive revision.
June 19, 1985 (50 Fed. Reg. 25532): Changed to a separate primary NAAQS and renumbered subsection (a) with immaterial change to 0.053 ppm (100 µg/$m^3$) (significant digit added, metric and non-metric units switched).
October 8, 1996 (61 Fed. Reg. 52852): Retained without revision.
February 9, 2010 (75 Fed. Reg. 6474): Retained with immaterial change to 53 ppb (units changed, metric units removed).

**1971 Secondary Annual Average NAAQS for Nitrogen Oxides (as $NO_2$) (Current)**

Standard: 0.053 ppm (100 µg/$m^3$) annual arithmetic mean
Citation: 40 C.F.R. 50.11(c) (2012) (originally 42 C.F.R. 410.11 (1971), then 40 C.F.R. 50.11 (1972) and 40 C.F.R. 50.11(b) (1985))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as a primary and secondary NAAQS of 100 µg/$m^3$ (0.05 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 84): Recodified without substantive revision.
June 19, 1985 (50 Fed. Reg. 25532): Changed to a separate secondary NAAQS and renumbered subsection (b) with immaterial change to 0.053 ppm (100 µg/$m^3$) (significant digit added, metric and non-metric units switched).
October 8, 1996 (61 Fed. Reg. 52852): Retained without revision.
February 9, 2010 (75 Fed. Reg. 6474): Retained without revision; renumbered subsection (c).

**2010 Primary One-Hour NAAQS for Nitrogen Oxides (as $NO_2$) (Current)**

Standard: 100 ppb three-year average of the annual 98th percentile of the daily maximum one-hour average concentration
Citation: 40 C.F.R. 50.11(b) (2012)

February 9, 2010 (75 Fed. Reg. 6474): Original adoption.

Two primary and one secondary NAAQS for nitrogen oxides are codified in one federal rule: 40 C.F.R. 50.11. The Board has codified the two 1971 standards in 35 Ill. Adm. Code 243.124. The Board has replaced the existing provision with the text of the three federal NAAQS, adding the 2010 primary 24-hour NAAQS for nitrogen oxides to the text. Each of the federal provisions relative to nitrogen oxides appears in a separate subsection, with the subsection for each of the standards. The three NAAQS for nitrogen oxides are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.124(a) | 40 C.F.R. 50.11(a) | 1971 primary annual average NAAQS for nitrogen oxides |

| | | |
|---|---|---|
| 243.124(b) | 40 C.F.R. 50.11(b) | 2010 primary 24-hour NAAQS for nitrogen oxides |
| 243.124(c) | 40 C.F.R. 50.5 | 1971 secondary annual average NAAQS for nitrogen oxides |

The Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for nitrogen oxides in the initial portion of this discussion.

The Board has codified the federal NAAQS for nitrogen oxides without substantive revision. All of the deviations from the literal text of the federal NAAQS are itemized in Table 1.

**Section 243.125: Ozone.** USEPA adopted the initial primary and secondary one-hour NAAQS for photochemical oxidants[21] in 1971. USEPA superseded that primary and secondary one-hour standard in 1979 with a standard for ozone. USEPA established a primary and secondary eight-hour standard for ozone in 1997 and a more stringent eight-hour standard in 2008. The evolution of the NAAQS for ozone is summarized as follows:

1971 Primary and Secondary One-Hour NAAQS for Total Photochemical Oxidants ($O_X$) (Removed)

Standard: 0.08 ppm not to be exceeded more than one hour per year
Citation: 40 C.F.R. 50.9 (1972) (originally 42 C.F.R. 410.9 (1971))

April 30, 1971 (36 Fed. Reg. 8186): Original adoption as 160 µg/$m^3$ (0.08 ppm).
November 25, 1971 (36 Fed. Reg. 22369, 22384): Recodified without substantive revision
February 18, 1975 (40 Fed. Reg. 7042): Amended to require the use of federally approved monitoring methods (FRMs and FEMs).
February 8, 1979 (44 Fed. Reg. 8202): Removed

1979 Primary and Secondary One-Hour NAAQS for Ozone ($O_3$) (Revoked as to All Areas in Illinois)

Standard: 0.12 ppm not to be exceeded more than one day per year
Citation: 40 C.F.R. 50.9(a) (2012)

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[21] Photochemical oxidants are pollutants formed in the atmosphere by the reaction of nitrogen oxides with hydrocarbons. USEPA, Communications, Education, and Public Affairs, *Terms of Environment: Glossary, Abbreviations, and Acronym* (Dec. 1997), EPA 175-B-97-001, at 35. Ozone is the principal photochemical oxidant. Others are nitrogen dioxide, peroxyacetyl nitrates, formaldehyde, acrolein, and organic peroxides. *See* Proposed Air Quality Standards, R72-7 (July 10, 1975), slip op. at 23-24.

February 8, 1979 (44 Fed. Reg. 8202): Original adoption as 0.12 ppm (235 $\mu g/m^3$).
March 9, 1993 (58 Fed. Reg. 13008): Retained without revision.
July 18, 1997 (62 Fed. Reg. 38856): Sunset provision added: the standard does not apply to an area after USEPA has designated that the area has attained the 1979 primary and secondary one hour standard.
July 20, 2000 (65 Fed. Reg. 45182): Sunset provision revised: the standard does not apply to an area once the 1997 primary and secondary eight-hour standard is effective and is no longer subject to judicial review, and after USEPA has designated that the area has attained the 1979 primary and secondary one hour standard.[22]
April 30, 2004 (69 Fed. Reg. 23951): Sunset provision revised: the standard does not apply to an area one year after USEPA has designated the attainment status of the area under the 1997 primary and secondary one hour standard.[23]
August 3, 2005 (70 Fed. Reg. 44470): Note added to the one-hour ozone attainment designation table in 40 C.F.R. 81.314 stating that the 1979 one-hour NAAQS for ozone was revoked effective June 15, 2005.

**1997 Primary and Secondary Eight-Hour NAAQS for Ozone ($O_3$) (Subject to Partial Sunset)**

Standard: 0.08 ppm annual fourth-highest daily maximum, averaged over three years
Citation: 40 C.F.R. 50.10(a) (2012)

July 18, 1997 (62 Fed. Reg. 38856): Original adoption.
May 21, 2012 (77 Fed. Reg. 30160, 30170): Partial sunset provision added:[24] the 1997 primary and secondary eight-hour standard will no longer

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[22] This modification was a result of the *American Trucking Assoc.* litigation. *See supra* note 14. By this action, USEPA further amended 40 C.F.R. 81.314 to remove an earlier determination that the 1997 primary and secondary one-hour NAAQS for ozone does not apply to areas that were in compliance with the standard. *See* 65 Fed. Reg. 45182, 83, 220-22 (July 20, 2000); *see also* 63 Fed. Reg. 31014, 41-42 (June 5, 1998) (reinstating original determination of inapplicability); 63 Fed. Reg. 11842, 47 (Mar. 11, 1998) (withdrawing original determination of inapplicability); 63 Fed. Reg. 2726, 48-49 (Jan. 16, 1998) (original determination of inapplicability).

[23] USEPA simultaneously designated the attainment status of all areas of Illinois for the 1997 eight-hour NAAQS for ozone, effective June 15, 2012. *See* 69 Fed. Reg. 23858 (Apr. 30, 2004).

[24] The 1997 primary and secondary eight-hour standard continues to apply for all other purposes. *See* 40 C.F.R. 50.10(c)(2012). USEPA explained that the 2008 eight-hour standard replaced the 1997 eight-hour standard, but the 1997 standard has been retained for implementation purposes

apply to an area for transportation conformity purposes only one year after USEPA has made a designation of the area for the 2008 primary and secondary eight-hour standard.

**2008 Primary and Secondary Eight-Hour NAAQS for Ozone ($O_3$) (Current)**

Standard: 0.075 ppm annual fourth-highest daily maximum, averaged over three years

Citation: 40 C.F.R. 50.15(a) (2012)

March 27, 2008 (73 Fed. Reg. 16483): Original adoption.

Three primary and secondary NAAQS for ozone are codified in three federal rules: 40 C.F.R. 50.9, 50.10, and 50.15. The Board has codified the 2008 primary and secondary eight-hour NAAQS for ozone in 35 Ill. Adm. Code 243.125. The Board has replaced the existing provision relative to ozone with the text of the federal NAAQS, adding the 1997 primary and secondary eight-hour NAAQS to the text. Each of the still-applicable federal provisions relative to ozone appears in a separate subsection, with the subsection for each of the standards.

The Board included the 1979 primary and secondary one-hour NAAQS for ozone in the May 16, 2013 proposal for public comment, but removes that standard from the adopted version of the rules. For the reasons stated below, the Board has determined that it is not necessary to include the 1979 NAAQS. The two NAAQS for ozone are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.125(a) | 40 C.F.R. 50.10 | 1997 Primary and Secondary Eight-Hour NAAQS for Ozone |
| 243.125(b) | 40 C.F.R. 50.13 | 2008 Primary and Secondary Eight-Hour NAAQS for Ozone |

The Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for ozone in the initial portion of this discussion.

The Board has codified the federal NAAQS for ozone without substantive revision. All of the deviations from the literal text of the federal NAAQS for Ozone are itemized in Table 1. Two revisions that the Board has not made warrant discussion. These relate to the sunset of the 1979 one-hour and the partial sunset of the 1997 eight-hour NAAQS for ozone.

***Sunset of the 1979 Primary and Secondary One-Hour NAAQS for Ozone.*** The conditions of the sunset clause applicable to the 1979 one-hour standard have been fulfilled. It is

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while USEPA formulates rules for transition from the 1997 standard to the 2008 standard. *See* 73 Fed. Reg. 16436, 503 (Mar. 27, 2008).

possible for the Board to omit the material derived from 40 C.F.R. 50.9 from the adopted version of the present amendments.

The 1979 one-hour NAAQS for ozone has not applied to any area of Illinois after June 5, 2005. The 1979 standard provides that it no longer applies to an area one year after the effective date of its area designation by USEPA for the 1997 primary and secondary eight-hour standard for ozone. *See* 40 C.F.R. 50.9(b) (2012). USEPA designated areas of Illinois for the 1997 primary and secondary eight-hour NAAQS for ozone effective June 15, 2004. *See* 40 C.F.R. 81.314 (2012) (the table for the 1979 eight-hour NAAQS for ozone); 69 Fed. Reg. 23858 (Apr. 30, 2004) (designation of all areas of Illinois). USEPA revoked the 1979 one-hour NAAQS as to all areas of Illinois effective June 15, 2005. *See* 40 CFR 81.314 (table for one-hour NAAQS for ozone, note 3; 70 Fed. Reg. 44470, 75 (Aug. 3, 2005) (adding the footnote relating revocation of the 1979 NAAQS for ozone to the table of area designations).[25]

The Board included the 1979 one-hour NAAQS in the proposal for public comment, but now removes that standard from the final version of these rules. The testimony of Mr. Kolaz at hearing maintained that the Board should remove the revoked 1979 one-hour NAAQS for ozone. Tr. at 7-9; Pre-filed testimony of David Kolaz at 3. By PC 1, IERG made this point more clearly. *See* PC 1 at 2-3. The Board cannot adopt standards that do not apply to persons or facilities in Illinois. 415 ILCS 5/7.2(a)(1) (2012).

***Partial Sunset of the 1997 Primary and Secondary Eight-Hour NAAQS for Ozone.*** The conditions of the sunset clause applicable to the 1997 eight-hour standard will be fulfilled before final adoption of the present amendments. This sunset, however, is partial—for purposes of transportation conformity alone. The partial sunset occurs one year after the area designations for the 2008 eight-hour standard, after June 15, 2013. *See* 40 C.F.R. 50.10(c) (2012); 40 C.F.R. 81.314 (2012) (the table for the 2008 eight-hour NAAQS for ozone); 77 Fed. Reg. 34221 (June 11, 2012) (designation of areas surrounding Chicago); 77 Fed. Reg. 30088 (May 21, 2012) (designation of the rest of Illinois). The Board has included 40 C.F.R. 50.10 in the present amendments due to the partial nature of the sunset provision.

**Section 243.126: Lead.** USEPA adopted the initial primary NAAQS for lead in 1978. *See* 36 Fed. Reg. 46246 (Oct. 5, 1978). USEPA recently adopted a more-stringent primary NAAQS in 2008. The development of the primary NAAQS for lead are outlined as follows:

**1978 Primary Calendar Quarterly Average NAAQS for Lead (Subject to Sunset)**

Standard: 1.5 µg/m$^3$ maximum arithmetic mean averaged over a calendar quarter not to be exceeded in total suspended material

Citation: 40 C.F.R. 50.12(a) (2012) (originally 40 C.F.R. 50.12 (1979))

October 5, 1978 (43 Fed. Reg. 46246): Original adoption.

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[25] The federal SIP requirements now allow the State to apply to USEPA for removal of the obligation for a maintenance plan for the 1979 one-hour standard eight years after such a revocation and any time after USEPA has designated all areas of the State for the 1997 eight-hour standard. 40 C.F.R. 51.905(e) (2012). Eight years after that revocation is June 15, 2013.

November. 12, 2008 (73 Fed. Reg. 66964): Renumbered to subsection (a); sunset provision added: the standard does not apply to an area one year after USEPA designation of the attainment status of that area under the 2008 primary and secondary three-month average standard, with one exception[26].

**2008 Primary Three-Month Average NAAQS for Lead (Current)**

Standard: 0.15 µg/$m^3$ arithmetic mean averaged over a three-month period
Citation: 40 C.F.R. 50.16(a) (2012)

November. 12, 2008 (73 Fed. Reg. 66964): Original adoption.

Both primary NAAQS for lead remain codified in two federal rules: 40 C.F.R. 50.12 and 50.16. The Board has codified the 2008 primary three-month NAAQS for lead in 35 Ill. Adm. Code 243.126. The Board has replaced the existing provision relative to lead with the text of the federal NAAQS, adding the 1978 primary calendar quarterly NAAQS for lead to the text. Each of the federal provisions relative to lead appears in a separate subsection, one for each of the 1978 and 2008 standards. The two NAAQS for lead are codified as follows:

| Subsection | Federal Citation | NAAQS |
|---|---|---|
| 243.126(a) | 40 C.F.R. 50.12 | 1978 Primary Calendar Quarterly Average NAAQS for Lead |
| 243.126(b) | 40 C.F.R. 50.16 | 2008 Primary Three-Month Average NAAQS for Lead |

The Board repeats that the Board does not engage in substantive review of federal standards in the context of an identical-in-substance proceeding, except as necessary to incorporate them into the Illinois air regulations. Persons wishing to understand the substance of a federal standard should review the *Federal Register* notices by which USEPA has adopted, reviewed, and amended the various standards. Those notices are listed in the foregoing review of the federal standards for lead in the foregoing outline of federal development of the lead NAAQS.

The Board has codified the federal NAAQS for lead without substantive revision. All of the deviations from the literal text of the federal NAAQS are itemized in Table 1. The Board discusses here only one significant issue relating to the federal standards: sunset provision in the 1978 primary NAAQS for lead. The issue did not result in deviation from the federal text.

***Sunset of the 1978 Primary Calendar Quarterly Average NAAQS for Lead.*** The adoption of the 2008 NAAQS for lead resulted in addition of a sunset clause to the 1978 NAAQS for lead. The Board does not see that the conditions of the sunset clause have yet been met for all areas of Illinois, so the Board has included the 1978 NAAQS in this adopted rule.

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[26] The exception relates to areas deemed not in attainment with the 1978 standard before the effective date of the 2008 standard.

When adopting the 2008 standard, USEPA added a sunset clause to the 1978 primary calendar quarterly average NAAQS for lead. *See* 40 C.F.R. 50.12(b)(2012); 73 Fed. Reg. 66964 (November. 12, 2008). The sunset clause provides that the 1978 NAAQS no longer applies to an area that USEPA has designated for the 2008 standard one year after the effective date of the designation, except for areas that USEPA has designated "non-attainment" with the 2008 standard. *See* 40 C.F.R. 50.12(b) (2012). For non-attainment areas, the 1978 standard no longer applies after USEPA has approved a plan for attainment or maintenance of the 2008 NAAQS. *See Id.*

For the 2008 NAAQS for lead, USEPA has designated two areas of the state as non-attainment and the rest of the State as "unclassifiable/attainment." The two non-attainment areas are segments of Cook and Madison Counties. *See* 40 C.F.R. 81.314 (2012); 76 Fed. Reg. 72097 (Nov. 22, 2011); 75 Fed. Reg. 71033 (Nov. 22, 2010). Since the Board cannot find a USEPA-approved plan for attainment or maintenance for those two areas, the 1978 NAAQS for lead remains viable in limited areas of the State. The Board has incorporated the 1978 standard for lead into the Illinois rules, adding explanation of the status of this NAAQS in an appended Board note.

**Non-Inclusion of the 2012 NAAQS for $PM_{2.5}$ and $PM_{10}$**

The Board monitors USEPA actions in the several identical-in-substance subject areas[27] on an ongoing basis for USEPA actions that would require Board rulemaking activity. If the Board observes a USEPA action subsequent to the nominal timeframe of an identical-in-substance proceeding that affects the same subject matter, the Board has included that later action within the rules under development. *See, e.g.*, SDWA Update, USEPA Amendments (January 1, 2012 through June 30, 2012, and July 25, 2012), R13-2 (Jan. 24, 2013), slip op. at 3, 6 (no additional amendments); RCRA Subtitle C Update, USEPA Amendments (July 1, 2008 through December 31, 2008 and June 15, 2010), R09-16, RCRA Subtitle C Update, USEPA Regulations (January 1, 2009 through June 30, 2009), R10-4 (June 17, 2010), slip op. at 5-6, 272 (withdrawing amendments); SDWA Update, USEPA Amendments (January 1, 2007 though June 30, 2007 and June 3, 2008), R08-7, SDWA Update, USEPA Amendments (July 1, 2007 though December 31, 2007), R08-13 (Dec. 18, 2008), slip op. at 4, 8 (adding amendments).

On January 15, 2013, USEPA determined to retain the 1987 primary and secondary 24-hour NAAQS for $PM_{10}$, revised the data handling conventions applicable to all four of the $PM_{2.5}$ NAAQS[28], and adopted two new NAAQS for particulate matter[29] There are one new NAAQS

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[27] Definition of volatile organic material, NAAQS, underground injection control, wastewater pretreatment, RCRA Subtitle C (hazardous waste), underground storage tanks, and RCRA Subtitle D (municipal solid waste landfill) regulations. *See* 415 ILCS 5/9.1(e), 10(H), 13(c), 13.3, 22.4(a) and (c), and 22.40(a) (2012) (respectively).

[28] The 1997 and 2006 Primary and secondary annual average and 24-hour NAAQS for $PM_{2.5}$.

for $PM_{10}$ and three new NAAQS for $PM_{2.5}$. Those standards are the following (using the format employed above for all of the historical and existing NAAQS):

**1987 Primary and Secondary 24-Hour NAAQS for $PM_{10}$**

Standard: 150 µg/$m^3$ not to be exceeded more than once per year, on a three-year average basis
Citation: 40 C.F.R. 50.6(a) (2012)

July 1, 1987 (52 Fed. Reg. 24634): Original adoption.
July 18, 1997 (62 Fed. Reg. 38652): Sunset provision added.[30]
December 22, 2000 (65 Fed. Reg. 80776): Sunset provision removed[31]
January 15, 2012 (78 Fed. Reg. 3086): Retained without revision.

**1997 Primary and Secondary Annual Average NAAQS for $PM_{2.5}$**

Standard: 15.0 µg/$m^3$ arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.7(a) (2012) (originally 40 C.F.R. 50.7(a)(1) (1998))

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Renumbered to subsection (a).
January 15, 2012 (78 Fed. Reg. 3086): Retained without revision, but subject to revised data handling conventions in appendix N to 40 C.F.R. 50.

**1997 Primary and Secondary 24-Hour NAAQS for $PM_{2.5}$**

Standard: 65 µg/$m^3$ 98th percentile, averaged over three years
Citation: 40 C.F.R. 50.7(a) (2012) (originally 40 C.F.R. 50.7(a)(1) (1998))

July 18, 1997 (62 Fed. Reg. 38652): Original adoption.
July 30, 2004 (69 Fed. Reg. 45592): Renumbered to subsection (a).
January 15, 2012 (78 Fed. Reg. 3086): Retained without revision, but subject to revised data handling conventions in appendix N to 40 C.F.R. 50.

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[29] The USEPA NAAQS webpage (www.epa.gov/ttn/naaqs/standards/pm/s_pm_history.html) lists all of the remaining standards as 2012 standards: the primary annual NAAQS for $PM_{2.5}$, added as 40 C.F.R. 50.18(a); the secondary annual NAAQS for $PM_{2.5}$, which remains unchanged as 40 C.F.R. 50.13(a) (the 2006 standard); the primary and secondary 24-hour NAAQS for $PM_{2.5}$, which was added as 40 C.F.R. 50.18(a) and remains codified as 40 C.F.R. 50.13(a) (the 2006 standard); and the primary and secondary 24-hour NAAQS for $PM_{10}$, which remains codified as 40 C.F.R. 50.6(a) (the 1987 standard).

[30] Not described in this summary outline because USEPA subsequently removed the sunset provision. *See* 40 C.F.R. 50.6(d) (1998) (the removed sunset provision).

[31] As a result of the decision in American Trucking Assoc. v. EPA, 175 F. 2d 1027, *modified en banc*, 195 F.3d 4 (D.C. Cir. 1999), *aff'd in part and rev'd in part sub nom.* Whitman v. American Trucking Assoc., 531 U.S. 457, 121 S. Ct. 903, 149 L. Ed. 2d 69 (2001), *on remand*, 283 F.3d 355 (D.C. Cir. 2002).

**2006 Primary and Secondary Annual Average NAAQS for $PM_{2.5}$**

Standard: 15.0 µg/$m^3$ arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.13(a) (2012)

October 17, 2006 (71 Fed. Reg. 61144): Original adoption.
January 15, 2012 (78 Fed. Reg. 3086): Retained without revision, but subject to revised data handling conventions in appendix N to 40 C.F.R. 50.

**2006 Primary and Secondary 24-Hour NAAQS for $PM_{2.5}$**

Standard: 35 µg/$m^3$ 98th percentile, averaged over three years
Citation: 40 C.F.R. 50.13(a) (2012)

October 17, 2006 (71 Fed. Reg. 61144): Original adoption.
January 15, 2012 (78 Fed. Reg. 3086): Retained without revision, but subject to revised data handling conventions in appendix N to 40 C.F.R. 50.

**2012 Primary Annual Average NAAQS for $PM_{2.5}$**

Standard: 12.0 µg/$m^3$ arithmetic mean, averaged over three years
Citation: 40 C.F.R. 50.18(a), as added at 78 Fed. Reg. 3086, 277 (Jan. 15, 2013)

January 15, 2012 (78 Fed. Reg. 3086): Original adoption.

**2012 Primary 24-Hour NAAQS for $PM_{2.5}$**

Standard: 35.0 µg/$m^3$ 98th percentile, averaged over three years
Citation: 40 C.F.R. 50.18(a), as added at 78 Fed. Reg. 3086, 277 (Jan. 15, 2013)

January 15, 2012 (78 Fed. Reg. 3086): Original adoption.

The Board has opted not to include the January 15, 2013 federal amendments relating to $PM_{2.5}$ with this initial adoption of identical-in-substance NAAQS standards. Adding the amendments to the present proceeding would cause minor delay in adoption of the present initial amendments. The Board sees no benefit in adding the new 2012 NAAQS to this proceeding. The State and USEPA will begin monitoring for the new standards as a matter of federal law whether the Board adopts the January 13, 2013 federal amendments in this proceeding or in a separate proceeding that could conclude as late as January 14, 2014.[32]

## Responses to Requests for Public Comments

The Board requested comments on general aspects of the May 16, 2013 proposal for public comment, such as the Board's approach to the statutory mandate, the standardized naming of the NAAQS in the text, the choice of structure, complete replacing of the existing Illinois standards, the incorporations by reference, etc. The Board further requested public comments on specific aspects of the proposal. The specific requests for comments are itemized as follows:

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[32] *See* 415 ILCS 5/7.2(b) (2012).

1. Removal of monitoring locations requirement: Is it true that the design, location, and operation of monitoring locations and networks occurs as a matter of federal law? Is it true that the design, location, and operation of monitoring locations and networks are subject to USEPA review and approval? Is there any reason the Illinois NAAQS regulations should include incorporation of 40 C.F.R. 58 by reference? If the Board should retain the monitoring requirement, is the following language in 35 Ill. Adm. Code 243.106 sufficient?

> All monitoring performed to fulfill the requirements of this Part must be performed at stations and networks of stations designed, located, and operated according to plans approved by USEPA according to the requirements of 40 C.F.R. 58.

IERG stated support for removal of the monitoring locations requirement, observing that the requirement is not a proper component of ambient air quality standards. Pre-filed testimony of David Kolaz at 2.

2. Removal of non-degradation requirement: Do the federal PSD requirements render the non-degradation rule of 35 Ill. Adm. Code 243.104 unnecessary? Is there any way that the Board should perceive non-degradation as a segment of the federal NAAQS?

IERG stated support for removal of the non-degradation requirement, observing that the requirement is not a proper component of ambient air quality standards. Pre-filed testimony of David Kolaz at 2.

3. USEPA approvals of FRMs and FEMs: Will the unavoidable delay in incorporation of USEPA methods designations into the Illinois regulations create difficulty in implementation of the federal NAAQS in Illinois? Is there any available alternative that could minimize the delay?

The Board received no comments in this regard.

4. Expiration of the 1979 one-hour NAAQS for ozone: Is it true that the 1979 standard for ozone will not apply to any area of Illinois after July 20, 2013? If so, may the Board remove the 1979 one-hour standard for ozone after that date?

IERG stated support for removal of the 1979 one-hour NAAQS for ozone. Mr. David Kolaz observed on behalf of IERG that this NAAQS was revoked in 2005 as to all areas in Illinois. Tr. at 7-10; Pre-filed testimony of David Kolaz at 2. IERG made this point also in PC 1.

5. Expiration of the requirement for a maintenance plan for the 1979 one-hour NAAQS for ozone: Is it true that the State may apply to USEPA to remove the requirement for a maintenance plan for the 1979 one-hour NAAQS for ozone

after June 15, 2013? If so, may the Board remove the 1979 one-hour standard for ozone after that USEPA approval?

The Board received no comments in this regard.

6. Partial expiration of the 1997 primary and secondary eight-hour NAAQS for ozone: Is it true that that the 1997 eight-hour standard for ozone will no longer apply to any area after June 15, 2013 for transportation conformity purposes? For what purposes will that 1997 standard continue to apply? What event or series of events could occur within the next few years that could warrant removal of the 1997 from the Illinois regulations?

   The Board received no comments in this regard.

7. Expiration of the 1978 primary calendar quarterly average NAAQS for lead: Is it true that the 2011 and 2012 area designations for the 2008 NAAQS for lead rendered the 1978 calendar quarterly NAAQS for lead inapplicable to all areas of Illinois except for the two limited non-attainment areas? What is the current status of the State obtaining an approved attainment or maintenance plan for those two areas? When USEPA has approved an attainment or maintenance plan for those areas, should the Board remove the 1978 NAAQS for lead from the Illinois regulations?

   The Board received no comments directly in this regard. Rather, Mr. David Kolaz testified that, as a general matter, the Board should remove revoked and inapplicable federal standards from the Illinois regulations. Tr. at 9; Pre-filed testimony of David Kolaz at 2-3.

8. General re removal of expired NAAQS: When the Board observes that the conditions in a sunset clause applicable to a NAAQS may have been fulfilled, should the Board propose deletion of that standard? As a second alternative, should the Board wait until USEPA has expressly codified that the NAAQS does not apply to any area in Illinois? As a second alternative, should the Board leave that NAAQS in the Illinois rules until USEPA has removed that standard from 40 C.F.R. 50?

   Mr. David Kolaz testified that the Board should remove revoked and inapplicable federal standards from the Illinois regulations. Tr. at 9; Pre-filed testimony of David Kolaz at 2-3.

## Deviations from the Literal Text of the Federal Amendments and Non-Federally Derived Corrections and Clarifications

The Board routinely examines federal amendments and the base text of rules open for amendments to find any areas that need correction or clarification. JCAR and the Office of the Secretary of State also routinely examine the text and suggest corrections and clarifications.

Sometimes suggestions arise from the Agency, USEPA, or members of the regulated community. The Board often makes revisions as a result. The revisions thus made are not directly derived from federal amendments. The Board is ever mindful of the limited discretion authorized in the context of an identical-in-substance proceeding. The Board is limited to "those changes that are necessary for compliance with the Illinois Administrative Code," "technical changes that in no way change the scope or meaning of any portion of the regulations," and "apparent typographical and grammatical errors." *See* 415 ILCS 5/7.2(a) and (a)(7) (2012). Thus, the Board will only make minor, non-substantive corrections and clarifications in this context. These corrections are non-substantive in effect. Tables follow that document the corrections and clarifications made in this proceeding. The first lists the deviation from the literal text of the USEPA amendments involved in this proceeding. The second lists the correction made in this docket that was not prompted by federal amendments.

**Tabulations of Deviations from the Literal Text of the Federal Amendments and Miscellaneous Board Housekeeping Amendments.**

The tables below list numerous corrections and amendments that are not based on current federal amendments. Table 1 (beginning immediately below) lists a number of federal amendments that the Board has not included in this docket. Table 1 gives a brief explanation why the Board has declined to make each. Table 1 (beginning immediately below) includes deviations made in the adopted text from the verbatim text of the federal amendments. Table 2 (beginning immediately after Table 1 on page 91) contains corrections and clarifications that the Board made in the base text involved in the present amendments. The amendments listed in Table 2 are not directly derived from the current federal amendments. Some of the entries in these tables are discussed further in appropriate segments of the general discussion beginning at page 6 of this opinion. Table 3 (beginning on page ### below) is a listing of revisions made to the text of the amendments from that proposed and set forth in the Board's opinion and order of May 16, 2013. Table 3 indicates the changes made, as well as the source that suggested each of the changes. Table 4 (on page ### below) indicates suggested revisions that the Board has not made in adopting these amendments. Each entry gives a brief explanation why the Board did not incorporate the suggested change.

**Table 1:**
**Deviations from the Text of the Federal Rules**

| Illinois Section | 40 C.F.R. Section | Revision(s) |
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| 243 table of contents, 243.105 heading | 50.14 heading | Removed "Treatment of" from before "air quality monitoring data"; capitalized the first letter of each word in the heading. |

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| 243 table of contents, 243.105 heading | Table 1 to 50.14(c)(2)(vi) heading | Removed “Data to be Used for Designations Decisions” from before “for New or Revised NAAQS”; changed the format from large and small capital letters to standard format with capitalization of the first letter of each word in the heading. |
| 243.101 generally | 40 C.F.R. 50.1 | Replaced the existing language with new language more directly derived from the corresponding federal provision. |
| 243.101 preamble | 40 C.F.R. 50.1(a) | Added the affirmative sentence, “For the purposed of this Part, terms listed below . . . this Section.”; changed “herein” to “in this Section”; changed “shall” to “will”; changed “Act” to “the Act; the CAA, incorporated by reference in Section 243.108; or 35 Ill. Adm. Code 201.102” (which are Illinois law that should be consistent with the CAA). |
| 243.101 “Act” | 40 C.F.R. 50.1(b) | Placed the defined term in quotation marks; changed the definition from meaning the federal CAA, as amended, to mean the Environmental Protection Act. |
| 243.101 “Agency” | 40 C.F.R. 50.1(c) | Placed the defined term in quotation marks; changed the definition from meaning USEPA, as amended, to mean the Illinois EPA. |
| 243.101 “Clean Air Act” | 40 C.F.R. 50.1(b) | Created the separate defined term to mean the federal statute; placed the defined term in quotation marks; added the alternative defined abbreviated term “CAA” in quotation marks; added “federal” for clarity; changed “42 U.S.C. 1857-18571, as amended by Pub. L. 91-604” to “42 U.S.C. 7401 et seq., as amended.” |

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| 243.101 “exceedance of an NAAQS” | 40 C.F.R. 50.1(l) | Placed the defined term in quotation marks; moved the definition into alphabetic order; changed the long defined term “exceedance with respect to a national ambient air quality standard” to the shorter form “exceedance of a NAAQS”; changed “such standard” to “such NAAQS.” |
| 243.101 “exceptional event” | 40 C.F.R. 50.1(j) | Placed the defined term in quotation marks; moved the definition into alphabetic order; added “fulfills all of the following criteria” and a colon after “that”; divided so to place each criterion into a separate subsidiary paragraph; added “the event” (four times); changed the commas to semicolons to separate each criterion; changed “the event is an event caused” to “the event is caused”; changed “Administrator” to “USEPA”; changed “it does not” to “an ‘exceptional event’ does not”; added “any of the following,” followed by a colon, and subdivided the conditions into subsidiary paragraphs; changed the separating commas to semicolons. |

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| 243.101 “federal equivalent method” | 40 C.F.R. 50.1(g), 50.11(d)(2), and 53.1 | Placed the defined term in quotation marks; moved the definition into alphabetic order; added “federal” to the defined term and the abbreviated alternative definition “FEM” based on the definition that appears at closely related 40 C.F.R. 53.1; changed “that has been designated” to active-voice “that USEPA has designated”; changed “in accordance with part 53 of this chapter” to “pursuant to 40 CFR 53 and which is listed included in the List of Designated Methods, including later updates, as incorporated by reference . . . 243.108”; changed “it does not include” to “the term ‘federal equivalent method’ does not include”; changed “for which an equivalent method designation has been cancelled” to active-voice “for which USEPA has cancelled or superseded an equivalent method designation”; changed “§ 53.11 or § 53.16 of this chapter” to “40 CFR 53.11 or 53.16”; added the parenthetical “as reflected by . . . Section 243.108.” |
| 243.101 “federal equivalent method” Board note | 40 C.F.R. 50.1(g), 50.11(d)(2), and 53.1 | Added explanation of the derivation of the definition from multiple sources; added explanation of “including later updates”; added explanation of the effectiveness of designation of an FEM and cancellation of an FEM. |

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| 243.101 “federal reference method” | 40 C.F.R. 50.1(f) and 53.1 | Placed the defined term in quotation marks; moved the definition into alphabetic order; added “federal” to the defined term and the abbreviated alternative definition “FRM” based on the definition that appears at closely related 40 C.F.R. 53.1; changed “that has been designated” to active-voice “that USEPA has designated” (twice); changed “in an appendix to this part” to “in an appendix to 40 CFR 50, incorporated . . . 243.108”; changed “in accordance with part 53 of this chapter” to “pursuant to 40 CFR 53 and which is listed included in the List of Designated Methods, including later updates, as incorporated by reference . . . 243.108”; changed “it does not include” to “the term ‘federal reference method’ does not include”; changed “for which an reference method designation has been cancelled” to active-voice “for which USEPA has cancelled or superseded a reference method designation”; changed “§ 53.11 or § 53.16 of this chapter” to “40 CFR 53.11 or 53.16”; added the parenthetical “as reflected in . . . Section 243.108.” |
| 243.101 “federal reference method” Board note | 40 C.F.R. 50.1(f) and 53.1 | Added explanation of the derivation of the definition from multiple sources; added explanation of “including later updates”; added explanation of the effectiveness of designation of an FRM and cancellation of an FRM. |
| 243.101 “micrograms per cubic meter” | 40 C.F.R. 50.6(a); 50.7(a), and 50.13(a) and 58.1 (definitions of $PM_{2.5}$, $PM_{10}$, $PM_{10C}$, and $PM_{10-2.5}$) | Added the definition of the term and the abbreviated form to support consistent use of the abbreviated form throughout the text. |

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| 243.101 "micrograms per cubic meter" Board note | 40 C.F.R. 50.6(a); 50.7(a), 50.8(a)(1) and (a)(2), and 50.13(a) and 58.1 (definitions of $PM_{2.5}$, $PM_{10}$, $PM_{10C}$, and $PM_{10-2.5}$) | Added explanation that the Board added the definitions of "micrograms per cubic meter" and "milligrams per cubic meter." |
| 243.101 "milligrams per cubic meter" | 40 C.F.R. 50.8(a)(1) and (a)(2) | Added the definition of the term and the abbreviated form to support consistent use of the abbreviated form throughout the text. |
| 243.101 "National Ambient Air Quality Standards" | 40 C.F.R. 50 generally, and "Terms of Environment: Glossary, Abbreviations, and Acronyms" (Dec. 1997) | Borrowed the definition of the term and the abbreviated form to support consistent use of the abbreviated form throughout the text; changed plural "National Ambient Air Quality Standards" to singular; changed plural "standards" to singular "a standard"; changed "EPA" to "USEPA"; changed "the country" to "the United States." |
| 243.101 "National Ambient Air Quality Standards" Board note | 40 C.F.R. 50 generally, and "Terms of Environment: Glossary, Abbreviations, and Acronyms" (Dec. 1997) | Added explanation of the added definition and its source. |
| 243.101 "natural event" | 40 C.F.R. 50.1(f) and 53.1 | Placed the defined term in quotation marks; moved the definition into alphabetic order. |
| 243.101 "parts per billion" | 40 C.F.R. 50 generally, and "Terms of Environment: Glossary, Abbreviations, and Acronyms" (Dec. 1997) | Derived the definition and the abbreviated form to support consistent use of the abbreviated form throughout the text. |
| 243.101 "parts per billion" Board note | 40 C.F.R. 50 generally, and "Terms of Environment: Glossary, Abbreviations, and Acronyms" (Dec. 1997) | Added explanation of the added definition and the definition of "parts per million" and their source. |

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| 243.101 “parts per million” | 40 C.F.R. 50 generally, and “Terms of Environment: Glossary, Abbreviations, and Acronyms” (Dec. 1997) | Derived the definition and the abbreviated form to support consistent use of the abbreviated form throughout the text. |
| 243.101 “$PM_{10}$” | 40 C.F.R. 50.6(c) parenthetical | Derived the definition of the abbreviated form to support consistent use of the abbreviated form throughout the text; placed the defined term in quotation marks; changed “particles having” to “particulate matter that has”; added the abbreviation “µm” in parentheses. |
| 243.101 “$PM_{2.5}$”Board note | 40 C.F.R. 50.6(c) parenthetical | Added explanation of the added definition and the definition. |
| 243.101 “$PM_{2.5}$” | 40 C.F.R. 50.7(a) parenthetical | Derived the definition of the abbreviated form to support consistent use of the abbreviated form throughout the text; placed the defined term in quotation marks; changed “particles having” to “particulate matter that has”; added the abbreviation “µm” in parentheses. |
| 243.101 “$PM_{10}$”Board note | 40 C.F.R. 50.7(a) parenthetical | Added explanation of the added definition and the definition. |
| 243.101 “traceable” | 40 C.F.R. 50.1(h) | Placed the defined term in quotation marks; moved the definition into alphabetic order; added the comma before “such as a National Bureau of Standards . . . reference Manual (CRM)” to offset the parenthetical. |
| 243.101 “USEPA” | 40 C.F.R. 50.1(c) | Added the definition based on the federal definition of “Agency”; changed the defined term to “USEPA”; added “United States” before “Environmental Protection Agency.” |
| 243.101 “USEPA” Board note | 40 C.F.R. 50.1(c) | Added explanation of the derivation and use of the defined term in the text. |
| 243.101 Board note | 40 C.F.R. 50.1 generally | Added explanation of the derivation of this Section. |

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| 243.102 heading | 50.2 heading | Changed the heading from “Preamble” to “Scope” to correspond with the federal regulations. |
| 243.102 generally | 50.2 generally | Replaced the existing language of this Section with that of the corresponding federal regulation. |
| 243.102(a) | 50.2(a) | Changed “as set forth in this part” to “This Part sets forth” and moved it to the beginning of the provision; changed “national primary and secondary ambient air quality standards” to use the defined abbreviation “the NAAQS”; added “adopted by USEPA”; changed “section 109 of the Act” to “section 109 of the CAA (42 USC 7409)”; added “and incorporated into this Part pursuant to 415 ILCS 5/7.2 and 10(H).” |
| 243.102(b) | 50.2(b) | Added the parenthetical “(primary NAAQS)”; changed “which the Administrator judges” to “that USEPA has judged” (twice); added the parenthetical “(secondary NAAQS)”; changed “such standards” to “these standards”; changed “primary and secondary standards” to “primary and secondary NAAQS”; changed “the Administrator” to “USEPA.” |
| 243.102(c) | 50.2(c) | Changed “primary and secondary ambient air quality standards” to “primary and secondary NAAQS”; changed “any State or Indian country” to “this State.” |
| 243.102 Board note | 40 C.F.R. 50.2 generally | Added explanation of the derivation of this Section. |
| 243.103 | None | Retained the applicability statement, despite the lack of a federal counterpart. |

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| 243.105 generally | 50.14 generally | Added the provision relative to monitoring data and exceptional events that had not counterpart in the Illinois regulations. |
| 243.105 heading | 50.14 heading | Removed “Treatment of” from before “air quality monitoring data”; capitalized the first letter of each word in the heading. |
| 243.105(a)(1) | 50.14(a)(1) | Changed “a State” to “the Agency”; change “EPA” to “USEPA”; moved “from use in the determinations” from before “by demonstrating” to follow “exclude”; changed plural “exceedances or violations . . . that are” to “an exceedance . . . that is”; changed “national ambient air quality standard” to the defined abbreviation “NAAQS”; divided the run-on sentence after “exceptional event” by addition of a period and “the Agency must”; changed “by demonstrating to USEPA’s satisfaction” to active-voice “demonstrate to USEPA”; changed “such event” to “the event.” |
| 243.105(a)(2) | 50.14(a)(2) | Added the indefinite article before “demonstration”; changed “exceedance or violation” to “exceedance”; changed “such standard” to “an NAAQS.” |
| 243.105(b) | 50.14(b) | Changed “EPA” to “USEPA”; added “USEPA has stated . . . as follow” and an ending colon. |

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| 243.105(b)(1) | 50.14(b)(1) | Added the topical heading "Exceptional events."; changed "EPA" to "USEPA"; added "has stated that it will"; changed "exceedances or NAAQS violations" to the singular defined term "exceedance of an NAAQS"; changed "a State demonstrates to EPA's satisfaction" to "the Agency has demonstrated"; changed "one or more national ambient air quality standards" to "one or more NAAQS"; created an independent clause by placing a comma before and changing "and otherwise satisfies" to "and the Agency otherwise satisfies"; changed "this section" to "40 CFR 50.14." |
| 243.105(b)(2) | 50.14(b)(2) | Added the topical heading "Fireworks displays."; changed "EPA" to "USEPA"; added "has stated that it will"; changed "exceedances or NAAQS violations" to the singular defined term "exceedance of an NAAQS"; changed "a State demonstrates to EPA's satisfaction" to "the Agency has demonstrated"; changed "one or more national ambient air quality standards" to "one or more NAAQS"; changed "and otherwise satisfies" to "and the State otherwise satisfies" preceded by a comma for an independent clause; changed "such data" to "USEPA has stated that these data"; changed "a State demonstrates" to "the Agency has demonstrated"; changed "such use of fireworks" to "the use of fireworks"; added a comma before and after "including . . . celebrations" to offset the parenthetical and add clarity; changed "this section" to "40 CFR 50.14." |

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| 243.105(b)(3) | 50.14(b)(3) | Added the topical heading “Prescribed fires.”; changed “EPA” to “USEPA” (three times); added “has stated that it will”; changed “exceedances or NAAQS violations” to the singular defined term “exceedance of an NAAQS”; changed “a State demonstrates to EPA’s satisfaction” to “the Agency has demonstrated”; changed “one or more national ambient air quality standards” to “one or more NAAQS”; created an independent clause by placing a comma before and changing “and otherwise satisfies” to “and the Agency otherwise satisfies”; changed “this section” to “40 CFR 50.14”; changed “definition in § 50.1(j)” to “definition of “exceptional event in Section 243.101”; changed “State” to “Agency”; changed “it” to “the State”; added the parenthetical abbreviation “(SMP)”; changed “State” to lower-case “state”; changed “the State” to “the Agency”; changed “its” to “the State’s”; changed “a SMP” to “an SMP.” |
| 243.105(b) Board note | 50.14(b) | Added explanation of the shift from “EPA shall” to “USEPA has stated that it will” in all occurrences in this subsection; added explanation of reliance on the defined term “exceedance of an NAAQS” in place of the federal language. |
| 243.105(c)(1) | 50.14(c)(1) | Moved the text of 40 CFR 50.14 (c)(1)(i) into subsection (c)(1),since there is no paragraph (c)(1)(ii); changed “All States and, where applicable, their political subdivisions” to “the Agency or, where the Agency has delegated authority pursuant to Section 4(g) or (r) of the Act [415 ILCS 5/4(g) or (r), the Agency’s delegatee”; changed “exceedances of an applicable air quality standard” to the defined term to “exceedances of an NAAQS.” |

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| 243.105(c)(2)(A) | 50.14(c)(2)(i) | Changed “a State shall” to “the Agency must”; changed “EPA” to “USEPA”; changed “exceedance of an applicable air quality standard” to the defined term “exceedance of an NAAQS”; changed “AQS” to “federal air quality system (AQS).” |
| 243.105(c)(2)(B) | 50.14(c)(2)(ii) | Changed “shall” to “must” (twice); changed “exceedance of an applicable air quality standard” to the defined term “exceedance of an NAAQS”; changed “EPA notifies the State” to “USEPA notifies the Agency” and moved it from before “by placing as concurrence flag” to follow “until”; changed “of its concurrence following the State’s” to “of USEPA concurrence following the Agency’s”; changed “its demonstration” to “a demonstration.” |
| 243.105(c)(2)(C) | 50.14(c)(2)(iii) | Added commas before and after the parenthetical “together with . . . the event”; changed “shall” to “must”; changed “EPA” to “USEPA”; changed “July 1st” to “July 1.” |
| 243.105(c)(2)(D) | 50.14(c)(2)(iv) | Replaced the federal language with explanation of omission of that language. |
| 243.105(c)(2)(E) | 50.14(c)(2)(v) | Replaced the federal language with explanation of omission of that language. |

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| 243.105(c)(2)(F) | 50.14(c)(2)(vi) | Changed “when EPA” to “USEPA has stated that when USEPA”; changed “its” to “USEPA”; added the comma before “and providing” to offset the final element of a series; changed “Table 1 provides the schedule” to “Table A provides the existing schedule”; changed “shall apply” to “apply”; changed “which” to “that” for a restrictive relative clause; changed “EPA anticipates revising Table 1” to “USEPA has stated that it will revise the table upon which Table A is based.” |
| 243.105(c)(3)(A) | 50.14(c)(3)(i) | Changed “a State that has flagged . . . and is requesting exclusion of . . . data” to “when the Agency has flagged . . . and is requesting exclusion of . . . data shall, the Agency must”; changed “to EPA” to “to USEPA” and moved it from after “data exclusion” to follow “a demonstration”; changed “the lesser of, 3 years following . . . was recorded or, 12 months” to “the sooner of three years following . . . or 12 months”; changed “a State” to “the Agency”; changed EPA” to “USEPA”; moved “to USEPA” from after “demonstration” to follow “must submit”; added a comma before “along with its demonstration” for a parenthetical clause. |
| 243.105(c)(3)(B) | 50.14(c)(3)(ii) | Replaced the federal language with explanation of omission of that language. |
| 243.105(c)(3)(C) | 50.14(c)(3)(iii) | Replaced the federal language with explanation of omission of that language. |
| 243.105(c)(3)(D) | 50.14(c)(3)(iv) | Changed “shall” to “must”; changed evidence that” to “the following evidence.” |
| 243.105(c)(3)(D)(i) | 50.14(c)(3)(iv)(A) | Added “that”; changed “criteria” to “definition of “exceptional event.” |

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| 243.105(c)(3)(D)(ii) | 50.14(c)(3)(iv)(B) | Added “that.” |
| 243.105(c)(3)(D)(iii) | 50.14(c)(3)(iv)(C) | Added “that.” |
| 243.105(c)(3)(D)(iv) | 50.14(c)(3)(iv)(D) | Added “that.” |
| 243.105(c)(3)(E) | 50.14(c)(3)(v) | Changed “State” to “Agency.” |
| 243.105 Board note | 40 C.F.R. 50.14 generally | Added explanation of the derivation of this Section. |
| 243.107 | 50.3 | Added commas before and after “for purposes of . . . lead” to offset it as a parenthetical; added commas before and after “for purposes of . . . Section 243.126(b)” to offset it as a parenthetical; changed “shall” to “must”. See the entry for this provision in Table 2 below. |
| 243.107 Board note | 50.3 generally | Added explanation of the derivation of this Section. |
| 243.108 | 50.4(c); 50.5(b); 50.6(a), (c)(1), and (c)(2); 50.7(b)(1) and (b)(2); 50.8(b)(1) and (b)(2); 50.9(a); 50.10(a) and (b); 50.11(d)(1), (d)(2), (e), and (f); 50.12(a); 50.13(a)(1), (a)(2), (b), and (c); 50.15(a) and (b); 50.16(a)(1), (a)(2), and (b); 50.17(b) and (c); and Appendices A-1, A-2, B, C, D, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, S, and T to 40 C.F.R. 50 generally | Added this provision for inclusion of required methods and interpretations by incorporation by reference to the appendices to 40 C.F.R. 50 and the List of Designated Methods. |
| 243.120 | 50.6, 50.7, and 50.13 generally | Replaced the existing language of this Section with that of the corresponding federal regulations. |

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| 243.120(a) | 50.6 heading | Changed “national primary and secondary ambient air quality standards for $PM_{10}$” to “1987 primary and secondary 24-hour NAAQS for $PM_{10}$.” |
| 243.120(a)(1) | 50.6(a) | Changed “national primary and secondary 24-hour ambient air quality standards for particulate matter” to “1987 primary and secondary 24-hour NAAQS for $PM_{10}$”; changed “micrograms per cubic meter ($\mu g/m^3$)” to the defined term “$\mu g/m^3$”; changed “standards are” to “1987 primary and secondary 24-houor NAAQS for $PM_{10}$ is”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.120(a)(2) | 50.6(b) | Replaced the federal designation “reserved” with a statement that maintains structural parity with the corresponding federal rule. |
| 243.120(a)(3) | 50.6(c) | Changed “primary and secondary standards” to “1987 primary and secondary 24-hour NAAQS for $PM_{10}$”; changed “shall” to “must”; removed the parenthetical “(particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers),” which has become the basis for a definition of “$PM_{10}$” in Section 243.101 (see the entry above in this Table 1); added “by a method that fulfills either of the following requirements.” |

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| 243.120(a)(3)(A) | 50.6(c)(1) | Changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108”; changed the ending comma to a semicolon. |
| 243.120(a)(3)(B) | 50.6(c)(2) | Changed “an equivalent method” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.120(a) Board note | 50.6 generally | Added explanation of the derivation of subsection (a); added explanation of USEPA removal of a transitional provision relative to the 1987 and 1997 NAAQS for PM as a result of litigation. |
| 243.120(b) | 50.7 heading | Changed “national primary and secondary ambient air quality standards for $PM_{2.5}$” to “1997 primary and secondary annual average and 24-hour NAAQS for $PM_{2.5}$.” |

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| 243.120(b)(1) | 50.7(a) | Changed "the national primary and secondary 24-hour ambient air quality standards for particulate matter are . . . annual arithmetic mean concentration, and . . . 24-hour average concentration" to "1997 primary and secondary annual average NAAQS for $PM_{10}$ is . . . , annual arithmetic mean concentration, and . . . , 24-hour average concentration,"; changed "micrograms per cubic meter ($\mu g/m^3$)" to the defined term "$\mu g/m^3$"; removed the parenthetical "(particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers)," which has become the basis for a definition of "$PM_{2.5}$" in Section 243.101 (see the entry above in this Table 1); changed "either" to "by a method that fulfills the either of following requirements." |
| 243.120(b)(1)(A) | 50.7(a)(1) | Changed "a reference method" to the defined abbreviation "an FRM"; changed "this part" to "40 CFR 50, incorporated by reference . . . Section 243.108"; added "by USEPA and listed in" after "and designated"; changed "in accordance with part 53 of this chapter" to "in the List of Designated Methods, incorporated by reference in Section 243.108." |
| 243.120(b)(1)(B) | 50.7(a)(2) | Changed "an equivalent method" to the defined abbreviation "an FEM"; added "by USEPA and listed in" after "and designated"; changed "in accordance with part 53 of this chapter" to "in the List of Designated Methods, incorporated by reference in Section 243.108." |

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| 243.120(b)(2) | 50.7(b) | Changed "annual primary and secondary $PM_{2.5}$ standards are" to singular "1997 primary and secondary annual average NAAQS for $PM_{2.5}$ is"; changed "this part" to "40 CFR 50, incorporated by reference . . . Section 243.108"; changed "micrograms per cubic meter" to the defined term "$\mu g/m^3$." |
| 243.120(b)(3) | 50.7(c) | Changed "24-hour primary and secondary $PM_{2.5}$ standards are" to singular "1997 primary and secondary 24-hour NAAQS for $PM_{2.5}$ is"; changed "this part" to "40 CFR 50, incorporated by reference . . . Section 243.108"; changed "micrograms per cubic meter" to the defined term "$\mu g/m^3$." |
| 243.120(b) Board note | 50.7 generally | Added explanation of the derivation of subsection (b); added explanations of the differences between the 1997 and 2006 NAAQS for $PM_{2.5}$ and Board retention of the 1997 NAAQS for $PM_{2.5}$. |
| 243.120(c) | 50.13 heading | Changed "national primary and secondary ambient air quality standards for $PM_{2.5}$" to singular "2006 primary and secondary annual average and 24-hour NAAQS for $PM_{2.5}$." |

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| 243.120(c)(1) | 50.13(a) | Changed "national primary and secondary ambient air quality standards for particulate matter are . . . annual arithmetic mean concentration, and . . . 24-hour average concentration" to "2006 primary and secondary annual average NAAQS for particulate matter is . . . , annual arithmetic mean concentration, and the 2006 primary and secondary 24-hour NAAQS for $PM_{10}$ is . . . , 24-hour average concentration,"; changed "micrograms per cubic meter ($\mu g/m^3$)" to the defined term "$\mu g/m^3$"; removed the parenthetical "(particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers)," which has become the basis for a definition of "$PM_{2.5}$" in Section 243.101 (see the entry above in this Table 1); changed "either" to "by a method that fulfills the either of following requirements." |
| 243.120(c)(1)(A) | 50.13(a)(1) | Changed "a reference method" to the defined abbreviation "an FRM"; changed "this part" to "40 CFR 50, incorporated by reference . . . Section 243.108"; added "by USEPA and listed in" after "and designated"; changed "in accordance with part 53 of this chapter" to "in the List of Designated Methods, incorporated by reference in Section 243.108." |
| 243.120(c)(1)(B) | 50.13(a)(2) | Changed "an equivalent method" to the defined abbreviation "an FEM"; added "by USEPA and listed in" after "and designated"; changed "in accordance with part 53 of this chapter" to "in the List of Designated Methods, incorporated by reference in Section 243.108." |

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| 243.120(c)(2) | 50.13(b) | Changed “annual primary and secondary $PM_{2.5}$ standards are” to singular “2006 primary and secondary annual average NAAQS for $PM_{2.5}$ is”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.120(c)(3) | 50.13(c) | Changed “24-hour primary and secondary $PM_{2.5}$ standards are” to singular “2006 primary and secondary 24-hourNAAQS for $PM_{2.5}$ is”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.120(c) Board note | 50.13 generally | Added explanation of the derivation of subsection (c). |
| 243.122 | 50.4, 50.5, and 50.17 generally | Replaced the existing language of this Section with that of the corresponding federal regulations. |
| 243.122(a) | 50.4 heading | Changed “national primary ambient air quality standards” to “1971 primary annual average and 24-hour NAAQS”; added “as” before and “($SO_2$)” as a defined abbreviation after “sulfur dioxide.” |
| 243.122(a)(1) | 50.4(a) | Changed “standard” to “1971 primary annual average NAAQS for sulfur oxides”; changed “parts per million (ppm)” to the defined term “ppm”; changed “shall” to “must” (twice). |
| 243.122(a)(2) | 50.4(b) | Changed “standard” to “1971 primary 24-hour NAAQS for sulfur oxides”; changed “parts per million (ppm)” to the defined term “ppm”; changed “shall” to “must” (three times). |

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| 243.122(a)(3) | 50.4(c) | Changed “shall” to “must”; changed “sulfur dioxide” to the defined abbreviation “$SO_2$”; changed “reference method” to the defined abbreviation “FRM”; changed “appendix A” to “appendix A-2”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; changed “an equivalent method” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.122(a)(4) | 50.4(d) | Changed “shall” to “must” (four times); changed “18, 19, 20, 21, 22, or 23 hourly averages” to “18-, 19-, 20-, 21-, 22-, or 23-hour averages”; changed “using 18, 19, etc.” to “using the number of hours (i.e., 18, 19, etc.)”; removed “then” from before “this must be considered.” |
| 243.122(a)(5) | 50.4(e) | Changed “standards . . . remain” to “1971 primary annual average and 24-hour NAAQS for sulfur oxides . . . remain”; changed “$SO_2$ national ambient air quality standards (NAAQS)” to “the 2010 primary one-hour NAAQS for sulfur oxides”; changed “the $SO_2$ NAAQS . . . will no longer apply . . .” to “the Board will delete the 1971 primary annual average and 24-hour NAAQS for sulfur oxides. . . after fulfillment of the conditions recited by USEPA in corresponding 40 CFR 50.4(e)” and deleted all following material. |

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| 243.122(a)(5) Board note | 50.4(e) generally | Added explanation of the continuing applicability of the 1971 primary annual average and 24-hour NAAQS for sulfur oxides, including supporting citations to USEPA regulations and publicly available documents and an explanation that the Board will remove the 1971 primary annual average and 24-hour NAAQS when the conditions of 40 CFR 50.4(e) have clearly been fulfilled. |
| 243.122(a) Board note | 50.4 generally | Added explanation of the derivation of subsection (a). |
| 243.122(b) | 50.5 heading | Changed "national secondary ambient air quality standard" to "1971 secondary three-hour NAAQS"; added "as" before and "($SO_2$)" after "sulfur dioxide." |
| 243.122(b)(1) | 50.5(a) | Changed "3-hour standard" to "1971 secondary three-hour NAAQS for sulfur oxides"; changed "parts per million (ppm)" to the defined term "ppm"; changed "3-hour" to written "three-hour" (twice); changed "shall" to "must" (three times); changed "nonoverlapping" to hyphenated "non-overlapping"; changed "1" to written "one." |
| 243.122(b)(2) | 50.5(b) | Changed "shall" to "must"; changed "sulfur dioxide" to the defined abbreviation "$SO_2$"; changed "reference method" to the defined abbreviation "FRM"; changed "appendix A" to "appendix A-2"; changed "this part" to "40 CFR 50, incorporated by reference . . . Section 243.108"; changed "an equivalent method" to the defined abbreviation "an FEM"; added "by USEPA and listed in" after "and designated"; changed "in accordance with part 53 of this chapter" to "in the List of Designated Methods, incorporated by reference in Section 243.108." |

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| 243.122(b)(3) | 50.5(c) | Changed “3-hour” to written “three-hour” (six times); changed “shall” to “must” (three times); removed “then” from before “this must be considered”; changed “3” to written “three.” |
| 243.122(b) Board note | 50.5 generally | Added explanation of the derivation of subsection (b). |
| 243.122(c) | 50.17 heading | Changed “national primary and secondary ambient air quality standards for sulfur oxides (sulfur dioxide)” to “1987 primary and secondary NAAQS for $PM_{10}$.” |
| 243.122(c)(1) | 50.17(a) | Changed “national primary 1-hour annual ambient air quality standard for oxides of sulfur” to “2010 primary one-hour NAAQS for sulfur oxides”; changed “parts per billion (ppm, which is 1 part in 1,000,000,000)” to the defined term “ppb”; changed “sulfur dioxide ($SO_2$)” to the defined abbreviation “$SO_2$.” |
| 243.122(c)(2) | 50.17(b) | Changed “1-hour primary ambient standard” to “2010 one-hour primary NAAQS for sulfur oxides”; changed “1-hour” to written “one-hour”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.122(c)(3) | 50.17(c) | Changed “standard” to “2010 one-hour primary NAAQS for sulfur oxides”; changed “appendix A or A-1” to “appendix A-1 or A-2”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; changed “a Federal Equivalent Method (FEM)” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |

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| 243.122(c) Board note | 50.17 generally | Added explanation of the derivation of subsection (a); added explanation of the continued effect of the 1971 primary NAAQS for sulfur oxides in subsection (a). |
| 243.123 heading | 50.8 heading | Retained the pre-existing heading "carbon monoxide." |
| 243.123 | 50.8 generally | Replaced the existing language of this Section with that of the corresponding federal regulation. |
| 243.123(a) | 50.8(a) | Changed "national primary ambient air quality standards" to "1971 eight-hour and one-hour primary NAAQS"; added "as follow." |
| 243.123(a)(1) | 50.8(a)(1) | Changed "an 8-hour average concentration" to written "an eight-hour average concentration of" and moved to the beginning of subsection (a)(1); changed "parts per million" to the defined abbreviation "ppm"; changed "milligrams per cubic meter" to the defined abbreviation "$mg/m^3$"; added a comma before "not to be exceeded" to offset the parenthetical. |
| 243.123(a)(2) | 50.8(a)(2) | Changed "a 1-hour average concentration" to written "an eight-hour average concentration of" and moved to the beginning of subsection (a)(2); changed "parts per million" to the defined abbreviation "ppm"; changed "milligrams per cubic meter" to the defined abbreviation "$mg/m^3$"; added a comma before "not to be exceeded" to offset the parenthetical. |
| 243.123(b) | 50.8(b) | Changed "shall" to "must"; added "a method that fulfills either of the following requirements." |

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| 243.123(b)(1) | 50.8(b)(1) | Changed “a reference method” to the defined abbreviation “an FRM”; added “of 40 CFR 50, incorporated by reference . . . Section 243.108”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108”; changed the ending comma to a semicolon. |
| 243.123(b)(2) | 50.8(b)(2) | Changed “an equivalent method” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.123(c) | 50.8(c) | Changed “8-hour” to written “eight-hour” (three times); changed “average” to “average concentration”; changed “shall” to “must” (twice); changed “six (or seven) hourly averages” to “six-hour (or seven-hour) averages”; changed “75 percent of the hourly average . . . are available” to “75 percent of the hourly average . . . is available.” |
| 243.123(d) | 50.8(d) | Corrected the spelling “comparision” to “comparison”; changed “shall” to “must” (twice); changed “parts per million” to the defined term “ppm.” |
| 243.123 Board note | 50.8 generally | Added explanation of the derivation of Section 243.123. |
| 243.124 | 50.11 generally | Replaced the existing language of this Section with that of the corresponding federal regulations. |
| 243.124 heading | 50.11 heading | Changed “national primary ambient air quality standards” to singular “nitrogen oxides (nitrogen dioxide as indicator).” |

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| 243.124(a) | 50.11(a) | Changed “national primary ambient air quality standard for oxides of nitrogen” to “1971 primary annual average NAAQS for nitrogen oxides”; changed “parts per billion” to the defined abbreviation “ppb”; added “($NO_2$)” as a defined abbreviation after “nitrogen dioxide.” |
| 243.124(b) | 50.11(b) | Changed “national primary 1-hour ambient air quality standard for oxides of nitrogen” to singular, written, and with defined abbreviations “2010 primary one-hour NAAQS for nitrogen oxides”; changed “nitrogen dioxide” to the defined abbreviation “$NO_2$.” |
| 243.124(c) | 50.11(c) | Changed “national primary ambient air quality standard for nitrogen dioxide” to singular “1971 secondary annual average NAAQS for nitrogen oxides”; changed “parts per billion” to the defined abbreviation “ppb”; changed “micrograms per cubic meter” to “µg/m3”; added “measured in the air as $NO_2$” as a parenthetical offset by a comma. |
| 243.124(d) | 50.11(d) | Changed “shall” to “must”; added “in subsections (a) through (c) of this Section” for enhanced clarity. |
| 243.124(d)(1) | 50.11(d)(1) | Changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108.” |

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| 243.124(d)(2) | 50.11(d)(2) | Changed “a Federal equivalent method” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.124(e) | 50.11(e) | Changed “annual primary standard” to “1971 primary annual average NAAQS for nitrogen oxides”; added “in subsections (a) of this Section” for enhanced clarity; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.124(f) | 50.11(f) | Changed “1-hour primary standard” to “2010 primary one-hour NAAQS for nitrogen oxides”; added “in subsection (b) of this Section” for enhanced clarity; changed “1-hour” to written “one-hour” (twice); changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.124(g) | 50.11(g) | Changed “secondary standard” to singular “1971 secondary annual average NAAQS for nitrogen oxides”; added “in subsection (c) of this Section” for enhanced clarity. |
| 243.124 Board note | 50.11 generally | Added explanation of the derivation of Section 243.124. |
| 243.125 heading | 50.9, 50.10, and 50.15 generally | Changed “8-hour ozone” to “ozone” to accommodate all ozone standards in this single provision. |
| 243.125 | 50.9, 50.10, and 50.15 generally | Replaced the existing language of this Section with that of the corresponding federal regulations. |

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| 243.125(a) | 50.10 heading | Changed “national 8-hour primary and secondary ambient air quality standards for ozone” to singular “1997 primary and secondary eight-hour NAAQS for ozone.” |
| 243.125(a)(1) | 50.10(a) | Changed “level of the national 8-hour primary and secondary ambient air quality standards for ozone” to singular “1997 primary and secondary eight-hour NAAQS for ozone”; changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “by USEPA” after “and designated”; changed “in accordance with part 53 of this chapter” to “and listed in the List of Designated Methods, incorporated by reference in Section 243.108”; changed “parts per million (ppm)” to the defined abbreviation “ppm”; changed “8-hour” to written “eight-hour.” |
| 243.125(a)(2) | 50.10(b) | Changed “8-hour primary and secondary ozone ambient air quality standards are” to singular “1997 primary and secondary eight-hour NAAQS for ozone is”; ; changed “8-hour” to written “eight-hour”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |

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| 243.125(a)(3) | 50.10(c) | Added "USEPA has stated in corresponding 40 CFR 50.10(c) that"; changed "1997 ozone NAAQS set forth in paragraph (a) of this section" to "1997 primary and secondary eight-hour NAAQS for $O_3$ set forth in subsection (b)(1) of this Section"; changed "1 year" to written "one year"; changed designation of the area" to "USEPA designation of that area"; changed "pursuant to section 107 of the Clean Air Act" to "pursuant to 42 USC 7407" and moved it from after "NAAQS" to follow "designation of that area"; changed "2008 ozone NAAQS" to "2008 primary and secondary eight-hour NAAQS for ozone"; changed "1997 ozone NAAQS" to "1997 primary and secondary eight-hour NAAQS for ozone"; changed "will continue to remain" to "will remain"; removed "the promulgation of" from after "notwithstanding"; changed "2008 ozone NAAQS under" to "2008 primary and secondary eight-hour NAAQS for ozone set forth in"; added "USEPA" before "designation"; changed "the 2008 ozone NAAQS" to "that 2008 primary and secondary eight-hour NAAQS for ozone"; moved the statement relative to codification of area designations into an appended Board note. |
| 243.125(a)(3) Board note | 50.10(c) | Changed "area designations and classifications with respect to the 1997 NAAQS are codified" to active-voice "USEPA has codified area designations and classifications with respect to the 1997 and 2008 primary and secondary NAAQS for ozone" area moved the statement into this Board note; changed "40 CFR part 81" to "40 CFR 81.314"; added a statement relative to future removal of the 1997 standards when they are clearly obsolete or USEPA removes them. |

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| 243.125(a) Board note | 50.10 generally | Added explanation of the derivation of this subsection (b). |
| 243.125(b) | 50.15 heading | Changed “national primary and secondary ambient air quality standards for ozone” to singular “2008 primary and secondary eight-hour primary and secondary NAAQS for $O_3$.” |
| 243.125(b)(1) | 50.15(a) | Changed “level of the national 8-hour primary and secondary ambient air quality standards for ozone” to singular “2008 primary and secondary eight-hour NAAQS for ozone”; changed “parts per million (ppm)” to the defined abbreviation “ppm”; changed “8-hour” to written “eight-hour”; changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “by USEPA” after “and designated”; changed “in accordance with part 53 of this chapter” to “and listed in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.125(b)(2) | 50.15(b) | Changed “8-hour primary and secondary ambient air quality standards” to singular “2008 primary and secondary eight-hour NAAQS for ozone”; changed “3-year” to written “three-year”; changed “8-hour” to written “eight-hour”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108.” |
| 243.125(b) Board note | 50.15 generally | Added explanation of the derivation of this subsection (c). |
| 243.126 | 50.12 and 50.16 generally | Replaced the existing language of this Section with that of the corresponding federal regulations. |

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| 243.126(a) | 50.12 heading | Changed “national primary and secondary ambient air quality standards” to singular “1978 primary and secondary NAAQS.” |
| 243.126(a)(1) | 50.12(a) | Changed “national primary and secondary ambient air quality standards for lead . . . are” to singular “the 1978 primary and secondary quarterly average NAAQS for lead . . . is”; changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “and designated by USEPA and listed in the List of Designated Methods, incorporated by reference in Section 243.108” (twice); changed “equivalent method” to the defined abbreviation “FEM”; changed “micrograms per cubic meter” to the defined abbreviation, “$\mu g/m^3$.” |

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| 243.126(a)(2) | 50.12(b) | Changed “standards” to singular “1978 NAAQS for lead”; removed “the promulgation of” from after “notwithstanding”; changed “lead national ambient air quality standards (NAAQS) in § 50.16” to singular “2008 primary and secondary NAAQS for lead in subsection (b) of this Section” (twice); changed “lead NAAQS” to “1978 primary and secondary NAAQS for lead”; added “by USEPA” after “and designated”; changed “section 107 of the Clean Air Act” to “42 USC 7407”; changed “lead NAAQS set forth in § 50.16” to “2008 primary and secondary NAAQS for lead set forth in subsection (b) of this Section”; changed “lead NAAQS set forth in this section” to “the 1978 primary and secondary NAAQS for lead”; changed “the effective date of § 50.16” to “January 12, 2009”; changed “the lead NAAQS” to “1978 primary and secondary NAAQS for lead”; changed “until that area submits, pursuant to section 191 of the Clean Air Act, and EPA approves an implementation plan” to “until USEPA has approved an implementation plan for that area pursuant to 42 USC 7415”; changed “and or” to “or.” |
| 243.125(a) Board note | 50.12 generally | Added explanation of the derivation of this subsection (a). |
| 243.126(b) | 50.16 heading | Changed “national primary and secondary ambient air quality standards” to singular “2008 primary and secondary NAAQS.” |

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| 243.126(b)(1) | 50.16(a) | Changed “national primary and secondary ambient air quality standards for lead (Pb) . . . are” to singular “the 2008 primary and secondary NAAQS for lead . . . is”; changed “micrograms per cubic meter” to the defined abbreviation “µg/$m^3$”; changed “3-month” to written “three-month”; changed “Pb” to “lead”; added “one of the following.” |
| 243.126(b)(1)(A) | 50.16(a)(1) | Changed “a reference method” to the defined abbreviation “an FRM”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.126(b)(1)(B) | 50.16(a)(2) | Changed “an equivalent method” to the defined abbreviation “an FEM”; added “by USEPA and listed in” after “and designated”; changed “in accordance with part 53 of this chapter” to “in the List of Designated Methods, incorporated by reference in Section 243.108.” |
| 243.126(b)(2) | 50.16(b) | Changed “national primary and secondary ambient air quality standards for Pb are” to singular “the 2008 primary and secondary NAAQS for lead is”; changed “3-month” to written “three-month”; changed “this part” to “40 CFR 50, incorporated by reference . . . Section 243.108”; changed “micrograms per cubic meter” to the defined abbreviation “µg/$m^3$.” |
| 243.126(b) Board note | 50.16 generally | Added explanation of the derivation of this subsection (b). |

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| 243.Table A | Table 1 to 50.14(c) | Moved the tabulated material from the body of the regulations into an appended table. |
| 243.Table A heading | Table 1 to 50.14(c) heading | Reformatted the text from large and small caps to standard title text; omitted "for data to be used in designations." |
| 243.Table A column 1 heading | Table 1 to 50.14(c) column 1 heading | Omitted "pollutant" and "standard," in favor of the single entry title "NAAQS"; changed "promulgation date" to "regulatory citations"; and replaced the virgules separating entries with hard returns. |
| 243.Table A row 1 column 1 entry | Table 1 to 50.14(c) row 1 column 1 entry | Changed "$PM_{2.5}$/24-Hr standard" to "2006 24-hour $PM_{2.5}$"; separated the name of the NAAQS from the parenthetical level by a hard return; added citations to the Illinois and corresponding federal rules; added the *Federal Register* citation for the pertinent notice of adopted rule. |
| 243.Table A row 1 column 3 entry | Table 1 to 50.14(c) row 1 column 3 entry | Omitted the marking for endnote "a." |
| 243.Table A row 1 column 4 entry | Table 1 to 50.14(c) row 1 column 4 entry | Omitted the marking for endnote "a." |
| 243.Table A row 2 column 1 entry | Table 1 to 50.14(c) row 2 column 1 entry | Changed "ozone/8-Hr standard" to "2008 eight-hour ozone"; separated the name of the NAAQS from the parenthetical level by a hard return; added citations to the Illinois and corresponding federal rules; added the *Federal Register* citation for the pertinent notice of adopted rule. |
| 243.Table A row 2 column 3 entry | Table 1 to 50.14(c) row 2 column 3 entry | Omitted the marking for endnote "a" (twice); changed "occurs" to past-tense "occurred"; omitted the marking for endnote "b." |

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| 243.Table A row 2 column 4 entry | Table 1 to 50.14(c) row 2 column 4 entry | Omitted the marking for endnotes “a” and “1”; changed “occurs” to past-tense “occurred”; omitted the marking for endnote “b.” |
| 243.Table A row 3 column 1 entry | Table 1 to 50.14(c) row 3 column 1 entry | Changed “$NO_2$/1-hour standard” to “2010 one-hour nitrogen oxides (as $NO_2$)”; separated the name of the NAAQS from the parenthetical level by a hard return; corrected “80-100 PPB, final level TBD)” to “(100 ppb)”; added citations to the Illinois and corresponding federal rules; added the *Federal Register* citation for the pertinent notice of adopted rule. |
| 243.Table A row 3 column 3 entry | Table 1 to 50.14(c) row 3 column 3 entry | Omitted the marking for endnote “a” (three times). |
| 243.Table A row 3 column 4 entry | Table 1 to 50.14(c) row 3 column 4 entry | Omitted the marking for endnote “a” (three times). |
| 243.Table A row 4 column 1 entry | Table 1 to 50.14(c) row 4 column 1 entry | Changed “$SO_2$/1-hour standard” to “2010 one-hour sulfur oxides (as $SO_2$)”; separated the name of the NAAQS from the parenthetical level by a hard return; corrected “50-100 PPB, final level TBD)” to “(75 ppb)”; added citations to the Illinois and corresponding federal rules; added the *Federal Register* citation for the pertinent notice of adopted rule. |
| 243.Table A row 4 column 3 entry | Table 1 to 50.14(c) row 4 column 3 entry | Omitted the marking for endnote “a” (three times); changed “occurs” to past-tense “occurred”; omitted the marking for endnote “b.” |
| 243.Table A row 4 column 4 entry | Table 1 to 50.14(c) row 4 column 4 entry | Omitted the marking for endnote “a” (three times); changed “occurs” to past-tense “occurred”; omitted the marking for endnote “b.” |
| 243.Table A | Table 1 to 50.14(c), endnote a | Omitted the endnote explanation of unchanged effective dates since publication. |

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| 243.Table A | Table 1 to 50.14(c), endnote b | Omitted the endnote explanation of changed effective dates since publication. |
| 243.Table A Board note | Table 1 generally and note | Added explanation of the derivation of Table A; changed “EPA notes” to “USEPA noted”; added “the information in” before “this table”; changed “EPA” to “that USEPA”; added “USEPA stated that” before and “in this table” after “the general schedule”; changed “used by EPA” to “that USEPA will use”; added explanation of correction of USEPA errors in the entries for the 2010 one-hour NAAQS for sulfur oxides and 2010 one-hour NAAQS for nitrogen oxides; added explanation of omission of endnotes “a” and “b.” |

**Table 2:**
**Board Housekeeping Amendments**

| Section | Source | Revision(s) |
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| 243 table of contents, 243.102 heading | Board | Changed “Preamble” to “Scope” to agree with corresponding 40 C.F.R. 50.2. |
| 243 table of contents, 243.104 heading | Board | Added the parenthetical “(Repealed)” to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243 table of contents, 243.106 heading | Board | Added the parenthetical “(Repealed)” to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243 table of contents, 243.122 heading | Board | Changed “8-Hour Ozone” to “Ozone” to accommodate consolidation of corresponding 40 C.F.R. 50.9, 50.10, and 50.15 into a single provision. |
| 243 table of contents, 243.122 heading | Board | Changed “Nitrogen Dioxide” to “Nitrogen Oxides (Nitrogen dioxide as Indicator)” to more closely follow the heading of corresponding 40 C.F.R. 50.11. |

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| 243 table of contents, 243.Appendix A heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243 table of contents, 243.Appendix B heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243 table of contents, 243.Appendix C heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243 authority note | Board | Changed "Section 10" to "Sections 7.2 and 10"; replaced the obsolete *Illinois Revised Statutes* citation with the current *Illinois Compiled Statutes* citation. |
| 243 source note | Board | Removed the obsolete citations "4 PCB 191" from after "R71-23" and "46 PCB 125" from after "R80-11." |
| 243.103 | Board | Changed passive-voice "are applicable" to "apply." |
| 243.104 | Board | Removed the provision relative to non-degradation, in order to rely on the language of individual federal anti-degradation provisions. |
| 243.106 | Board | Removed the provision, which had no direct counterpart in 40 C.F.R. 50. |
| 243.107 | Board | Removed the word "except," which does not exist in the corresponding text of 40 C.F.R. 50.3; changed "25ºC" to "5º C." See the entry for this provision in Table 1 above. |
| 243.102 generally | Board | Replaced the existing language of this Section with the incorporations by reference that are necessary to support a regulation that is identical-in-substance with the federal NAAQS regulations; reformatted the incorporations by reference so that individual incorporations by reference are no longer independently numbered. |

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| 243.102 "Government Printing Office" | Board | Added the listing of documents available from this source, including appendices A-1, A-2, B, C, D, F, G, H, J, K, L, N, O, P, Q, R, S, and T of 40 C.F.R. 50 for the purposes of the provisions cited in each entry. |
| 243.102 "Government Printing Office" Board note | Board | Added explanation of on-line availability of the documents. |
| 243.102 "USEPA, National Exposure Research Laboratory" | Board | Added the listing of the document available from this source, "List of Designated Reference and Equivalent Methods," for the purposes of the provisions cited in the entry. |
| 243.102 "USEPA, National Exposure Research Laboratory" | Board | Added the listing of the document available from this source, "List of Designated Reference and Equivalent Methods," for the purposes of the provisions cited in the entry; added a statement that this reference includes no *Federal Register* notices that approved methods after the date of the referenced version of the List. |
| 243.102 "USEPA, National Exposure Research Laboratory" Board note | Board | Added explanation of on-line availability of the documents. |
| 243.122 heading | Board | Changed "Nitrogen Dioxide" to "Oxides of Nitrogen (Nitrogen dioxide as Indicator)" to more closely follow the heading of corresponding 40 C.F.R. 50.11. |
| 243.Appendix A heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243.Appendix A | Board | Repealed the obsolete rules conversion table. |

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| 243.Appendix B heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243.Appendix B | Board | Repealed the obsolete rules conversion table. |
| 243.Appendix C heading | Board | Changed "Appendix" to uppercase "APPENDIX" to comport with *Illinois Administrative Code* codification requirements as asserted by the Office of the Secretary of State; added the parenthetical "(Repealed)" to accommodate repeal of this Section, which has no direct counterpart in 40 C.F.R. 50. |
| 243.Appendix C | Board | Repealed the obsolete past compliance dates table. |

**Table 3:**
**Revisions to the Text of the Proposed Amendments in Final Adoption**

| Section | Source | Revision(s) |
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| 243.101 "exceedance of a NAAQS" | JCAR | Changed "such standard" to "such NAAQS." |
| 243.101 "exceptional event" | JCAR | Changed "the event is an event caused" to "the event is caused." |
| 243.101 "federal equivalent method" | JCAR | Added the definite article to "included in the List of Designated Methods." |
| 243.101 "federal equivalent method" Board note | JCAR | Added the definite article to "included in the List of Designated Methods." |
| 243.101 "federal reference method" | JCAR | Added the definite article to "included in the List of Designated Methods." |
| 243.101 "federal reference method" Board note | JCAR | Added the definite article to "included in the List of Designated Methods." |

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| 243.101 “National Ambient Air Quality Standard” | JCAR | Changed “applies for outdoor air” to “applies to outdoor air.” |
| 243.101 “parts per billion” | JCAR | Removed the parenthetical “(immediately below).” |
| 243.101 “parts per million” | JCAR | Removed “and that for ‘parts per billion’ (immediately below).” |
| 243.101 “USEPA” | JCAR | Changed “in segments of text” to “in text.” |
| 243.101 Board note | JCAR | Corrected “C.F.R.” to “CFR.” |
| 243.102(b) | JCAR | Changed “such standards” to “these standards.” |
| 243.105(a)(1) | JCAR | Changed “such event” to “the event.” |
| 243.105(a)(2) | JCAR, Board | Corrected “paragraph (c)(3)(D) of this section” to “subsection (c)(3)(D) of this Section.” |
| 243.105(b)(1) | JCAR | Capitalized “Events” in the topical subheading. |
| 243.105(b)(2) | JCAR, Board | Capitalized “Displays” in the topical subheading; capitalized “State”; changed “such data” to “these data”; changed “this rule” to “this Section”; changed “such use” to “the use”; |
| 243.105(b)(3) | JCAR, Board | Capitalized “Fires” in the topical subheading; changed “such emissions” to “the emissions”; capitalized “State”; changed “a SMP” to “an SMP.” |
| 243.105(b) Board note | Board | Added a comma before “and (b)(3)” to offset the final element of a series. |
| 243.105(c)(1) | JCAR | Capitalized “Notification” in the topical subheading; removed the statutory citation “[415 ILCS 5/4(g) or (r)]”; changed “which” to “that” for a restrictive relative clause. |
| 243.105(c)(2) | JCAR | Capitalized “Data” in the topical subheading. |
| 243.105(c)(2)(A) | JCAR | Corrected “one of more measured exceedance” to “one or more measured exceedances.” |

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| 243.105(c)(2)(B) | JCAR | Changed “until after USEPA notifies” to “until USEPA notifies.” |
| 243.105(c)(2)(C) | JCAR | Changed “July 1st” to “July 1.” |
| 243.105(c)(2)(F) | JCAR | Changed “Table A to this Part” to “Table A of this Part” changed the subsequent reference, “Table A to this Part” to “Table A.” |
| 243.105(c)(3) | JCAR | Capitalized “Demonstrations” in the topical subheading. |
| 243.105(c)(3)(A) | JCAR | Moved “to USEPA” from after “demonstration” to follow “must submit”; added a comma before “along with its demonstration” for a parenthetical clause. |
| 243.105(c)(3)(C) | JCAR | Corrected “subsection (c)(3)(B)” to “subsection (c)(3)(C)”; corrected “40 CFR 50.14(b)(3)(ii)” to “40 CFR 50.14(b)(3)(iii).” |
| 243.108(b), “Appendix B to 40 CFR 50” | JCAR | Removed the parenthetical “(see below).” |
| 243.108(b), “Appendix I to 40 CFR 50” | JCAR | Corrected “243.125” to “Section 243.125.” |
| 243.108(b), “Appendix P to 40 CFR 50” | JCAR | Corrected “243.125” to “Section 243.125.” |
| 243.108(b), “Appendix S to 40 CFR 50” | JCAR | Corrected “243.125” to “Section 243.125.” |
| 243.120(a) | JCAR | Capitalized “Primary,” “Secondary,” and “24-Hour” in the topical subheading. |
| 243.120(a)(3)(A) | JCAR | Changed the ending comma to a semicolon. |
| 243.120(a)Board note | JCAR | Corrected “(Dec. 22, 1000)” to “(Dec. 22, 2000).” |
| 243.120(b) | JCAR | Capitalized “Primary,” “Secondary,” “Annual,” “Average,” and “24-Hour” in the topical subheading. |

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| 243.120(b)(1)(A) | JCAR | Added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical; added the definite article to “included in the List of Designated Methods.” |
| 243.120(b)(1)(B) | JCAR | Added the definite article to “included in the List of Designated Methods.” |
| 243.120(c) | JCAR | Capitalized “Primary,” “Secondary,” “Annual,” “Average,” and “24-Hour” in the topical subheading. |
| 243.120(c)(1)(A) | JCAR | Added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical; added the definite article to “included in the List of Designated Methods.” |
| 243.120(c)(1)(B) | JCAR | Added the definite article to “included in the List of Designated Methods.” |
| 243.120(c) Board note | Board | Corrected the indent level of the note to correspond with its associated subsection (c). |
| 243.122(a) | JCAR | Capitalized “Primary,” “Annual,” “Average,” “24-Hour,” “Sulfur” (twice), “Oxides, and “Dioxide” in the topical subheading. |
| 243.122(a)(3) | JCAR | Added the definite article to “included in the List of Designated Methods.” |
| 243.122(a)(4) | JCAR | Removed “then” from before “this must be considered.” |
| 243.122(a)(5) | JCAR | Corrected “the 1971 primary annual average and 24-hour NAAQS for sulfur oxides . . . remains” to “the 1971 primary annual average and 24-hour NAAQS for sulfur oxides . . . remain.” |
| 243.122(a) Board note | Board | Added “this subsection (a) is derived from 40 CFR 50.4 (2012).” |
| 243.122(b) | JCAR | Capitalized “Secondary,” “Three-Hour,” “Sulfur,” and “Oxides in the topical subheading. |
| 243.122(b)(3) | JCAR | Removed “then” from before “this must be considered.” |
| 243.122(b) Board note | Board | Corrected the indent level of the note to correspond with its associated subsection (b). |

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| 243.122(c) | JCAR | Capitalized “Primary,” “One-Hour,” “Sulfur,” and “Oxides in the topical subheading. |
| 243.122(c)(3) | JCAR | Corrected “a FRM” to “an FRM”; changed the em-dash in “A–2” to an en-dash in “A-2”; corrected “a FEM” to “an FEM.” |
| 243.123(a) | JCAR | Changed “as follow” to “as follows.” |
| 243.123(b)(1) | JCAR | Added the definite article to “included in the List of Designated Methods”; changed the ending comma to a semicolon. |
| 243.123(b)(2) | JCAR | Added the definite article to “included in the List of Designated Methods.” |
| 243.123(c) | JCAR | Changed “75 percent of the hourly average . . . are available” to “75 percent of the hourly average . . . is available.” |
| 243.124(d)(1) | JCAR | Corrected “a FRM” to “an FRM”; added the definite article to “included in the List of Designated Methods.” |
| 243.124(d)(2) | JCAR | Changed “Federal FEM” to “FEM”; added the definite article to “included in the List of Designated Methods.” |
| 243.124(e) | JCAR | Changed to lower-case “appendix S or 40 CFR 50”; added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical. |
| 243.124(f) | JCAR | Changed to lower-case “appendix S or 40 CFR 50”; added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical. |
| 243.125(a) | IERG, Board | Removed the proposed subsection (a), which contained the 1979 primary and secondary one-hour NAAQS for ozone, and renumbered proposed subsection (b) as subsection (a); capitalized “Primary,” “Secondary,” “Eight-Hour,” and “Ozone” for the topical heading. |
| 243.125(a)(1) | JCAR | Corrected “a FRM” to “an FRM”; added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical; added the definite article to “included in the List of Designated Methods.” |

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| 243.125(a)(3) Board note | Board IERG | Corrected the "the 1997 and 2008 primary and secondary NAAQS for ozone" to "the 2008 primary and secondary NAAQS for ozone"; corrected "40 CFR 50.9 or 50.10" to "40 CFR 50.10"; corrected "subsections (a) and (b)" to "this subsection (a)." |
| 243.125(a) Board note | Board IERG | Changed "this subsection (b)" to "this subsection (a)." |
| 243.125(b) | IERG, Board | Removed the proposed subsection (a), which contained the 1979 primary and secondary one-hour NAAQS for ozone, and renumbered proposed subsection (c) as subsection (b); capitalized "Primary," "Secondary," "Eight-Hour," and "Ozone" for the topical heading. |
| 243.125(b)(1) | JCAR | Added the definite article to "included in the List of Designated Methods" (twice); added a comma after "incorporated by reference in Section 243.108" to complete offsetting the parenthetical. |
| 243.125(b) Board note | Board IERG | Corrected the indent level of the note to correspond with its associated subsection (b); changed "this subsection (c)" to "this subsection (b)." |
| 243.125(c) Board note | Board | Corrected the indent level of the note to correspond with its associated subsection (c); changed "this subsection (c)" to "this subsection (b)." |
| 243.126(a) | IERG, Board | Capitalized "Primary," "Secondary," "Quarterly," "Average," and "Lead" for the topical heading. |
| 243.126(a)(1) | JCAR | Added the definite article to "included in the List of Designated Methods" (twice); changed "micrograms per cubic meter" to the defined abbreviation, "$\mu g/m^3$." |
| 243.126(a)(2) | JCAR | Corrected "this subsection" to "this subsection (a)." |
| 243.126(a) | IERG, Board | Capitalized "Primary," "Secondary," "Three-Month," "Average," and "Lead" for the topical heading. |
| 243.126(a) Board note | Board | Corrected the indent level of the note to correspond with its associated subsection (a). |

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| 243.126(b)(1)(A) | JCAR | Changed to lower-case “appendix G of 40 CFR 50”; added a comma after “incorporated by reference in Section 243.108” to complete offsetting the parenthetical; added the definite article to “included in the List of Designated Methods.” |
| 243.126(b)(1)(B) | JCAR | Added the definite article to “included in the List of Designated Methods.” |
| 243.126(b)(1)(A) | JCAR | Changed to lower-case “appendix R of 40 CFR 50.” |
| 243.126(b) Board note | Board | Corrected the indent level of the note to correspond with its associated subsection (b). |
| 243.Appendix A heading | JCAR | Removed underlining from the Section heading; removed the overstruck formerly centered table headings, “Appendix A” and “Rule into Section Table.” |
| 243.Appendix B heading | JCAR | Removed underlining from the Section heading; removed the overstruck formerly centered table headings, “Appendix B” and “Section into Rule Table.” |
| 243.Appendix C heading | JCAR | Removed underlining from the Section heading; removed the overstruck formerly centered table headings, “Appendix C” and “Past Compliance Dates.” |

**Table 4:**
**Requested Revisions to the Text of the Proposed Amendments Not Made in Final Adoption**

| Section Affected | Source of Request: Requested Revision | Explanation |
|---|---|---|
| 243 authority note | JCAR: Remove the comma before “and 27” in the citation. | The Board consistently uses a comma to offset the final element of a series. |
| 243.101 generally | JCAR: Change the smart quotes to straight quotes throughout (92 occurrences). | The Board consistently uses smart quotes. |
| 243.101 “federal equivalent method” | JCAR: Change “which is included” to “that is included.” | The Board prefers to use “which” for a subsequent restrictive relative clause. |

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| 243.101 “federal reference method” | JCAR: Change “which is included” to “that is included.” | The Board prefers to use “which” for a subsequent restrictive relative clause. |
| 243.105(a) | JCAR: Remove the period at the end of the one-word topical heading, “Requirements.” | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.105(b)(1) | JCAR: Change “where the Agency has demonstrated” to “when the Agency has demonstrated.” | Corresponding 40 C.F.R. 50.14(b)(1) uses “where,” which is appropriate with a situational condition, rather than a condition in time. |
| 243.105(b)(2) | JCAR: Change “where the Agency has demonstrated” to “when the Agency has demonstrated.” | Corresponding 40 C.F.R. 50.14(b)(2) uses “where,” “which” is appropriate with a situational condition, rather than a condition in time. |
| 243.105(b)(2) | JCAR: Change remove the comma from before “or other cultural events.” | The Board prefers to use a comma to offset the final element of a series. |
| 243.105(b)(2) | JCAR: Change “which satisfy” to “that satisfy.” | The Board prefers to use “which” for a subsequent restrictive relative clause. |
| 243.105(b)(3) | JCAR: Change “where the Agency has demonstrated” to “when the Agency has demonstrated.” | Corresponding 40 C.F.R. 50.14(b)(3) uses “where,” “which” is appropriate with a situational condition, rather than a condition in time. |
| 243.105(b)(3) | JCAR: Change the smart apostrophe in “State’s” to a straight apostrophe. | The Board prefers use of the smart apostrophe. |
| 243.105(c)(1) | JCAR: Change “where the Agency has delegated” to “when the Agency has delegated.” | Corresponding 40 C.F.R. 50.14(c)(1) uses “where,” “which” is appropriate with a situational condition, rather than a condition in time. |

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| 243.105(c)(1) | JCAR: Change the smart apostrophe in “State’s” to a straight apostrophe. | The Board prefers use of the smart apostrophe. |
| 243.105(c)(1) | JCAR: Remove the period at the end of the topical heading, “Flagging of Data.” | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.105(c)(2)(B) | JCAR: Change the smart apostrophe in “State’s” to a straight apostrophe. | The Board prefers use of the smart apostrophe. |
| 243.105(c)(2)(B) | JCAR: Change “subsection (c)(3) of this Section” to “subsection (c)(3).” | The Board has consistently added “of this Section” for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.105(c)(2)(C) | JCAR: Change “subsection (c)(2)(D) or (c)(2)(E) of this Section” to “subsection (c)(2)(D) or (c)(2)(E).” | The Board has consistently added “of this Section” for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.105(c)(2)(F) | JCAR: Change “a NAAQS” to “an NAAQS.” | The acronym is actually pronounced as a word, making “a” more appropriate. |
| 243.105(c)(3)(D)-(i) | JCAR: Change the smart quotes to straight quotes throughout (two occurrences). | The Board consistently uses smart quotes. |
| 243.108(b), “List of Designated . . . Methods” | JCAR: Change the smart quotes to straight quotes (four occurrences). | The Board consistently uses smart quotes. |

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| 243.120(a) | JCAR: Remove the period at the end of the topical heading, "1987 Primary and Secondary 24-Hour NAAQS for $PM_{10}$." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.120(a)(1) | JCAR: Change the smart quotes to straight quotes (two occurrences). | The Board consistently uses smart quotes. |
| 243.120(b) | JCAR: Remove the period at the end of the topical heading, "1997 Primary and Secondary Annual Average and 24-Hour NAAQS for $PM_{2.5}$." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.120(c) | JCAR: Remove the period at the end of the topical heading, "2006 Primary and Secondary Annual Average and 24-Hour NAAQS for $PM_{2.5}$." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.122(a) | JCAR: Remove the period at the end of the topical heading, "1971 Primary Annual Average and 24-Hour NAAQS for Sulfur Oxides (as Sulfur Dioxide)." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.122(a)(4) | JCAR: Change "subsection (b) of this Section" to "subsection (b)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |

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| 243.122(a)(5) | JCAR: Change "subsection (c) of this Section" to "subsection (c)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.122(a) Board note | JCAR: Change the web address, "http://www.epa.gov/ so2designations/recletters/ R5_IL_rec_wtechanalysis.pdf" to "http://www.epa.gov/ so2designations/recletters/ _IL_rec_wtechanalysis.pdf." | The web address is invalid with the omission of "R5." |
| 243.122(b) | JCAR: Remove the period at the end of the topical heading, "1971 Secondary Three-Hour NAAQS for Sulfur Oxides (as $SO_2$)." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.122(b)(3) | JCAR: Change "subsection (b)(1) of this Section" to "subsection (b)(1)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.122(c) | JCAR: Remove the period at the end of the topical heading, "2010 Primary One-Hour NAAQS for Sulfur Oxides (as $SO_2$)." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.122(c) Board note | JCAR: Change "subsection (a)(5) of this Section" to "subsection (a)(5)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |

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| 243.124(d) | JCAR: Change "subsections (a) through (c) of this Section" to "subsections (a) through (c)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.124(e) | JCAR: Change "subsection (a) of this Section" to "subsection (a)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.124(f) | JCAR: Change "subsection (b) of this Section" to "subsection (b)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.124(g) | JCAR: Change "subsection (c) of this Section" to "subsection (c)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.125(a) | JCAR: Remove the period at the end of the topical heading, "1997 Primary and Secondary Eight-Hour NAAQS for Ozone." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.125(b)(3) | JCAR: Change "subsection (b)(1) of this Section" to "subsection (b)(1)"; change "subsection (c)(1) of this Section" to "subsection (c)(1)"; change "subsection (c) of this Section" to "subsection (c)." | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |

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| 243.125(b) | JCAR: Remove the period at the end of the topical heading, "2008 Primary and Secondary Eight-Hour NAAQS for Ozone." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.126(a) | JCAR: Remove the period at the end of the topical heading, "1978 Primary and Secondary Quarterly Average NAAQS for Lead." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |
| 243.126(a)(2) | JCAR: Change "subsection (b) of this Section" to "subsection (b)" (three times). | The Board has consistently added "of this Section" for several years at the instruction of the Code Unit and JCAR. The Board would prefer confirmation and consideration of this suggested stylistic revision before making it. |
| 243.126(a)(2) Board note | JCAR: Change the smart quotes to straight quotes (two occurrences). | The Board consistently uses smart quotes. |
| 243.126(b) | JCAR: Remove the period at the end of the topical heading, "2008 Primary and Secondary Three-Month Average NAAQS for Lead." | All other topical headings that begin a subsection use the period, and the Board believes the period is appropriate where the topical heading is not followed by text within the same subsection. |

## ORDER

The Board directs the Clerk to provide notice in the *Illinois Register* of the following adopted amendments to the Illinois ambient air quality regulations at 35 Ill. Adm. Code 243:

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

PART 243
AIR QUALITY STANDARDS

SUBPART A: GENERAL PROVISIONS

Section
243.101 Definitions
243.102 ~~Preamble~~Scope
243.103 Applicability
243.104 Nondegradation (Repealed)
243.105 Air Quality Monitoring Data Influenced by Exceptional Events
243.106 Monitoring (Repealed)
243.107 Reference Conditions
243.108 Incorporations by Reference

SUBPART B: STANDARDS AND MEASUREMENT METHODS

Section
243.120 $PM_{10}$ and $PM_{2.5}$
243.121 Particulates (Repealed)
243.122 Sulfur Oxides (Sulfur Dioxide)
243.123 Carbon Monoxide
243.124 Nitrogen Oxides (Nitrogen Dioxide as Indicator)
243.125 ~~8 Hour~~ Ozone
243.126 Lead

~~Appendix~~ 243.APPENDIX A Rule into Section Table (Repealed)
~~Appendix~~ 243.APPENDIX B Section into Rule Table (Repealed)
~~Appendix~~ 243.APPENDIX C Past Compliance Dates (Repealed)
243.TABLE A Schedule of Exceptional Event Flagging and Documentation Submission for New or Revised NAAQS

AUTHORITY: Implementing ~~Section~~ Sections 7.2 and 10 and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1991, ch. 111 1/2, pars. 1010 and 1027)~~ [415 ILCS 5/7.2, 10, and 27].

SOURCE: Adopted as Chapter 2: Air Pollution, Part III: Air Quality Standards, in R71-23, ~~4 PCB 191,~~ filed and effective April 14, 1972; amended in R80-11, ~~46 PCB 125,~~ 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. _____, effective _____.

SUBPART A: GENERAL PROVISIONS

**Section 243.101 Definitions**

~~a) Except as stated in this Part and unless a different meaning of a term is clear from its context, the definitions of terms used in this Part shall be the same as those used in the Environmental Protection Act [415 ILCS 5] (Act).~~

~~b) All terms that appear in this Part have the definitions specified by 35 Ill. Adm. Code 201 or 211.~~

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 "$\mu g/m^3$" 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.

"$PM_{10}$" 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. _____, effective _____)

**Section 243.102 ~~Preamble~~ Scope**

~~a) Air quality standards are limits on atmospheric concentrations of air contaminants established for the purpose of protecting public health and welfare. The levels of air quality designated by the standards are designed to protect against injury to human, plant or animal life and they are further intended to allow maximum enjoyment of life and property consistent with the intent of the Act.~~

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) The first use of our air resources is to sustain life. Air entering the respiratory tract must not menace health. Therefore, the air quality standards set must, as a minimum, provide air which will not adversely affect, through acute or chronic symptoms, the health of the community. Adverse health effects include not only the possible production and aggravation of disease, but also interference with bodily functions. The standards have also taken into account soiling, corrosion, vegetation damage and other human effects.~~

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) Primary ambient air quality standards define levels of air quality which are necessary, with an adequate margin of safety, to protect the public health. Secondary ambient air quality standards define levels of air quality which are necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.~~

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.

~~d) The standards are more than goals. They are legally enforceable limitations, and any person causing or contributing to a violation of the standards is subject to enforcement proceedings under the Act. The standards have also been designed for use as a basis for the development of implementation plans by State and local agencies for the abatement and control of pollutant emissions from existing sources, and for the determination of air contaminant emission limitations to insure that population and economic growth trends do not add to the region's air pollution problems.~~

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

(Source: Amended at 37 Ill. Reg. _____, effective _____)

**Section 243.103 Applicability**

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

(Source: Amended at 37 Ill. Reg. _____, effective _____)

**Section 243.104 Nondegradation (Repealed)**

~~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: Repealed at 37 Ill. Reg. _____, effective _____)

**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.

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.

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. _____, effective _____)

**Section 243.106 Monitoring (Repealed)**

~~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 guildelines for established monitoring networks as developed by the United States Environmental Protection Agency.~~

(Source: Repealed at 37 Ill. Reg. _____, effective _____)

**Section 243.107 Reference Conditions**

All measurements of air quality that are expressed as mass per unit volume (e.g., micrograms per cubic meter, ~~except~~ other than for particulate matter ($PM_{2.5}$) standards contained in Section 243.120(b) and (c) 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) and (c), and lead, ~~measurements shall~~ 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. _____, effective _____)

**Section 243.108 Incorporations by Reference**

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

~~a) Pararosaniline method, 40 CFR 50, appendix A (1982).~~

~~b) Non-dispersive infrared spectrometry technique, 40 CFR 50, appendix C (1982), 36 Fed. Reg. 22391, November 25, 1971.~~

~~c) Colorimetric method, 36 Fed. Reg. 22396, November 25, 1971.~~

~~d) Ozone-ethylene reaction method, 40 CFR 50, appendix D (1982), 36 Fed. Reg. 22392, November 25, 1971.~~

~~e) Lead, 40 CFR 50, appendix G (2008).~~

~~f) Reference method for the determination of particulate matter as $PM_{10}$ in the atmosphere, 40 CFR 50, appendix J (1990).~~

~~g) Interpretation of the National Ambient Air Quality Standards (NAAQS) for particulate matter, 40 CFR 50, appendix K, 73 Fed. Reg. 61144 (October 17, 2006).~~

~~h) Reference method for the determination of particulate matter as $PM_{2.5}$ in the atmosphere, 40 CFR 50, appendix L, 73 Fed. Reg. 61144 (October 17, 2006).~~

~~i) Interpretation of the NAAQS for $PM_{2.5}$, 40 CFR 50, appendix N, 73 Fed. Reg. 1497 (January 9, 2008).~~

~~j) Interpretation of the NAAQS for $O_3$, 40 CFR 50, appendix P, 73 Fed. Reg. 16436 (March 27, 2008).~~

~~k) The NAAQS for Lead; Final Rule, 40 CFR 50, 51, 53, and 58, 73 Fed. Reg. 66964 (November 12, 2008).~~

~~l) Interpretation of the NAAQS for Lead, 40 CFR 50, appendix R, 73 Fed. Reg. 66964 (November 12, 2008).~~

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 (2012) (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 (2012) (Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method)), referenced in Section 243.122.

Appendix B to 40 CFR 50 (2012) (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 (2012) (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 (2012) (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 (2012) (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 (2012) (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 (2012) (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 (2012) (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 (2012) (Reference Method for the Determination of Particulate Matter as $PM_{10}$ in the Atmosphere, referenced in Section 243.120.

Appendix K to 40 CFR 50 (2012) (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 (2012) (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 (2012) (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 (2012) (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 (2012) (Interpretation of the Primary and Secondary National Ambient Air Quality Standards for Ozone), referenced in Section 243.125.

Appendix Q to 40 CFR 50 (2012) (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 (2012) (Interpretation of the National Ambient Air Quality Standards for Lead), referenced in Section 243.126.

Appendix S to 40 CFR 50 (2012) (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 (2012) (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, 2012) (referred to as "List of Designated Methods" and referenced in Sections 243.101, 243.120, 243.122, 243.123, 243.124, 243.125, and 243.126.
This reference includes the no Federal Register notices subsequent to December 17, 2012 that updated List of Designated Methods.

BOARD NOTE: This document 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 37 Ill. Reg. _____, effective _____)

SUBPART B: STANDARDS AND MEASUREMENT METHODS

**Section 243.120 $PM_{10}$ and $PM_{2.5}$**

~~a) Standards. The primary and secondary ambient air quality standards for $PM_{10}$ are a maximum 24-hour average concentration of 150 µg/$m^3$. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/$m^3$ is equal to or less than one, as measured and determined in accordance with subsection (b).~~

~~b) Measurement Method. For determining conformance with the $PM_{10}$ ambient air quality standards, $PM_{10}$ shall be measured by the method described in 40 CFR 50, appendix J or an equivalent method designated pursuant to 40 CFR 53 (incorporated by reference in Section 243.108). The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/$m^3$ is equal to or less than one, as determined in accordance with 40 CFR 50, appendix K (incorporated by reference in Section 243.108).~~

~~c) Standards. The primary and secondary ambient air quality standards for $PM_{2.5}$ are:~~

~~1) An annual arithmetic mean concentration of 15.0 µg/$m^3$ and as measured and determined in conformance with subsection (d).~~

~~2) A maximum 24-hour concentration of 35 µg/$m^3$, at the 98th percentile value, and as measured and determined in conformance with subsection (d).~~

~~d) Measurement Method for $PM_{2.5}$. For determining conformance with the $PM_{2.5}$ ambient air quality standards, $PM_{2.5}$ shall be measured by the method described in 40 CFR 50, appendix L or an equivalent method designated pursuant to 40 CFR 53 (incorporated by reference in Section 243.108). Compliance with the standards is determined using the methods and procedures described in 40 CFR 50, appendix N (incorporated by reference in Section 243.108).~~

~~1) The annual primary and secondary $PM_{2.5}$ standards are met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, appendix N, is less than or equal to 15.0 µg/$m^3$.~~

~~2) The 24-hour primary and secondary $PM_{2.5}$ standards are met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50, appendix N, is less than or equal to 35 µg/$m^3$.~~

a) 1987 Primary and Secondary 24-Hour NAAQS for $PM_{10}$.

1) The level of the 1987 primary and secondary 24-hour NAAQS for $PM_{10}$ is 150 µg/$m^3$, 24-hour average concentration. The 1987 primary and secondary NAAQS for $PM_{10}$ is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/$m^3$, 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 $PM_{10}$, particulate matter must be measured in the ambient air as $PM_{10}$ 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 (2012). USEPA adopted 1997 primary NAAQS for $PM_{10}$ 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 $PM_{10}$ 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/$m^3$, annual arithmetic mean concentration, and the 1997 primary and secondary 24-hour NAAQS for $PM_{2.5}$ is 65 µg/$m^3$, 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 $\mu g/m^3$.

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 $\mu g/m^3$.

BOARD NOTE: This subsection (b) is derived from 40 CFR 50.7 (2012). 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 $\mu g/m^3$, annual arithmetic mean concentration, and the 2006 primary and secondary 24-hour NAAQS for $PM_{2.5}$ is 35 $\mu g/m^3$, 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 $\mu g/m^3$.

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 $\mu g/m^3$.

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

(Source: Amended at 37 Ill. Reg. _____, effective _____)

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

~~a) Primary Standards. The primary ambient air quality standards for sulfur oxides measured as sulfur dioxide are:~~

~~1) An annual arithmetic mean concentration of 80 µg/m$^3$ (0.03 ppm); and,~~

~~2) A maximum 24-hour concentration, not to be exceeded more than once per year, of 365 µg/m$^3$ (0.14 ppm).~~

~~b) Secondary Standard. The secondary ambient air quality standard for sulfur oxides measured as sulfur dioxide is a maximum 3-hour concentration not to be exceeded more than once per year of 1,300 µg/m$^3$ (0.5 ppm).~~

~~c) Measurement Method. For determining conformance with sulfur oxide air quality standards, sulfur oxides shall be measured as sulfur dioxide by the pararosaniline method described in 40 CFR 50, appendix A, (incorporated by reference in Section 243.108), or by an equivalent method of proof approved by the Agency.~~

a) 1971 Primary Annual Average and 24-Hour NAAQS for Sulfur Oxides (as Sulfur Dioxide ($SO_2$)).

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 $SO_2$ 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: Corresponding 40 CFR 50.4(e) recites that the 1971 primary NAAQS for sulfur oxides remains effective in two types of areas for which USEPA has not yet approved 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. As of December 31, 2012, USEPA had not yet designated the attainment status of areas in Illinois. See 40 CFR 81.314 (2012). The Agency recommended that USEPA designate limited areas of Illinois as non-attainment with the 2010 primary one-hour NAAQS. See letter of June 2, 2011 from Laurel Kroack, Chief, Bureau of Air, Agency, to Cheryl A. Newton, Director, Office of the Air and Radiation Division, USEPA Region 5 (available at http://www.epa.gov/so2designations/recletters/R5_IL_rec_wtechanalysis.pdf). When the conditions of this subsection (a)(5) have been fulfilled, 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 (2012).

b) 1971 Secondary Three-Hour NAAQS for Sulfur Oxides (as $SO_2$).

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 $SO_2$ 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 (2012).

c) 2010 Primary One-Hour NAAQS for Sulfur Oxides (as $SO_2$).

1) The level of the 2010 primary one-hour NAAQS for sulfur oxides is 75 ppb, measured in the ambient air as $SO_2$.

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 (2012). The 1971 primary NAAQS for $SO_2$ 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. _____, effective _____)

**Section 243.123 Carbon Monoxide**

~~a) Standards. The ambient air quality standards for carbon monoxide are:~~

~~1) A maximum 8-hour concentration not to be exceeded more than once per year of 10 milligrams per cubic meter (9 ppm); and,~~

~~2) A maximum 1-hour concentration not to be exceeded more than once per year of 40 milligrams per cubic meter (35 ppm).~~

~~b) Measurement Method. For determining conformance with the carbon monoxide air quality standard, carbon monoxide shall be measured by the nondispersive infrared spectrometry technique as described in 40 CFR 50, App. C (1982), 36 Fed. Reg. 22,391, November 25, 1971, or by an equivalent method approved by the Agency.~~

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 $mg/m^3$), not to be exceeded more than once per year; and

2) A one-hour average concentration of 35 ppm (40 $mg/m^3$), 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. _____, effective _____)

**Section 243.124 Nitrogen Oxides (Nitrogen Dioxide as Indicator)**

~~a) Standard. The ambient air quality standard for nitrogen dioxide is an annual arithmetic mean concentration of 100 micrograms per cubic meter (0.05 ppm).~~

~~b) Measurement Method. For determining conformance with the nitrogen dioxide air quality standard, nitrogen dioxide shall be measured by the colorimetric method as described in 36 Fed. Reg. 22,396, November 25, 1971, or by an equivalent method approved by the Agency.~~

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 ($NO_2$).

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 $NO_2$.

c) The level of the 1971 secondary annual average NAAQS for nitrogen oxides is 0.053 ppm (100 µg/$m^3$), annual arithmetic mean concentration, measured in the ambient air as $NO_2$.

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. _____, effective _____)

**Section 243.125 ~~8-Hour~~ Ozone**

~~a) Standard. The primary and secondary ambient air quality standards for ozone are 0.075 ppm (parts per million) daily maximum 8-hour average concentration, measured and determined in accordance with subsection (b).~~

~~b) Measurement Method. Ozone shall be measured by a federal equivalent method based on 40 CFR 50, appendix D and designated in accordance with 40 CFR 53 (incorporated by reference in Section 243.108) or an equivalent method designated in accordance with 40 CFR 53. The primary and secondary ambient air quality standards are met when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.075 ppm, as determined using 40 CFR 50, appendix P (incorporated by reference in Section 243.108).~~

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. _____, effective _____)

**Section 243.126 Lead**

~~a) Standard. The primary and secondary ambient air quality standards for lead and its compounds measured as elemental lead are 0.15 µg/m$^3$, maximum rolling three month average measured and determined over a three-year period.~~

~~b) Measurement Method. For determining conformance with the ambient air quality standards for lead and its compounds, lead and its compounds shall be measured as elemental lead by federal equivalent method based on 40 CFR 50 appendix G and designated in accordance with 40 CFR 53, or by an equivalent method designated in accordance with 40 CFR 53 (incorporated by reference in Section 243.108).. Compliance with the primary and secondary ambient air quality standards shall be determined in accordance with 40 CFR 50, appendix R (incorporated by reference in Section 243.108).~~

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 µg/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 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 $\mu g/m^3$, 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 $\mu g/m^3$.

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

(Source: Amended at 37 Ill. Reg. _____, effective _____)

**Section 243.APPENDIX A Rule into Section Table (Repealed)**

| ~~RULE~~ | ~~SECTION~~ |
|---|---|
| ~~301~~ | ~~243.102~~ |
| ~~302~~ | ~~243.103~~ |
| ~~303~~ | ~~243.104~~ |
| ~~304~~ | ~~Appendix C~~ |
| ~~305~~ | ~~243.106~~ |

| | |
|---|---|
| ~~306~~ | ~~243.107~~ |
| ~~307~~ | ~~243.121~~ |
| ~~308~~ | ~~243.122~~ |
| ~~309~~ | ~~Repealed~~ |
| ~~310~~ | ~~243.123~~ |
| ~~311~~ | ~~243.124~~ |
| ~~312~~ | ~~243.125~~ |
| ~~313~~ | ~~243.126~~ |

(Source: Repealed at 37 Ill. Reg. _____, effective _____)

**Section 243.APPENDIX B Section into Rule Table <u>(Repealed)</u>**

| ~~SECTION~~ | ~~RULE~~ |
|---|---|
| ~~243.101~~ | ~~---~~ |
| ~~243.102~~ | ~~301~~ |
| ~~243.103~~ | ~~302~~ |
| ~~243.104~~ | ~~303~~ |
| ~~243.106~~ | ~~305~~ |
| ~~243.107~~ | ~~306~~ |
| ~~243.121~~ | ~~307~~ |
| ~~243.122~~ | ~~308~~ |
| ~~243.123~~ | ~~310~~ |
| ~~243.124~~ | ~~311~~ |
| ~~243.125~~ | ~~312~~ |
| ~~243.126~~ | ~~313~~ |

(Source: Repealed at 37 Ill. Reg. _____, effective _____)

**Section 243.APPENDIX C Past Compliance Dates <u>(Repealed)</u>**

~~Except as otherwise noted, compliance with this Part was required June 26, 1973.~~

(Source: Repealed at 37 Ill. Reg. _____, effective _____)

**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 $\mu g/m^3$) 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 |
| 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<br>2008<br>2009 | June 18, 2009<br>June 18, 2009<br>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<br>June 18, 2009<br>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<br>2009<br>2010 | July 1, 2010<br>July 1, 2010<br>April 1, 2011 | January 22, 2011<br>January 22, 2011<br>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<br>2009<br>2010<br>2011 | October 1, 2010<br>October 1, 2010<br>June 1, 2011<br>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<br>June 1, 2011<br>June 1, 2011<br>60 days after the end of the calendar quarter in which the event occurred or March 31, 2012, whichever date occured first |

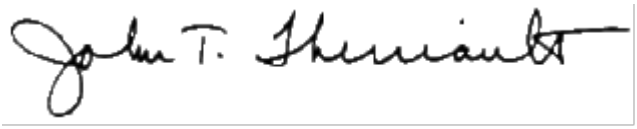
BOARD NOTE: Derived from table 1 to 40 CFR 50.14(c) (2012). USEPA noted that the information in this table of revised deadlines only applies to data that USEPA will use to establish the final initial designations for new or revised NAAQS. USEPA stated that the general schedule in this table applies for 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) cites the 2010 one-hour NAAQS for nitrogen oxides as "80-100 PPB, final level TBD" and the 2010 one-hour NAAQS for sulfur oxides as "80-100 PPB, final level TBD." The adopted 2010 one-hour NAAQS for $NO_X$ at 40 CFR 50.11(f) is 100 ppb and the adopted 2010 one-hour NAAQS for $SO_2$ is 75 ppb. The Board has used the actual NAAQS for these contaminants in this Table A. Further, corresponding table 1 to 40 CFR 50.14(c) includes endnotes "a" and "b" indicate whether dates for $NO_2$ and $SO_2$ are changed or unchanged, which the Board has omitted, since endnotes will serve no purpose in the Illinois regulations.

(Source: Added at 37 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

I, John Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on July 25, 2013, by a vote of 4-0.



_____
John Therriault, Clerk
Illinois Pollution Control Board