

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)	
)	
AIR QUALITY STANDARDS)	R09-19
CLEAN-UP: AMENDMENTS TO)	(Rulemaking – Air)
35 ILL. ADM. CODE PART 243)	

NOTICE OF FILING

TO: Mr. John C. Therriault	Mr. Timothy J. Fox
Assistant Clerk of the Board	Hearing Officer
Illinois Pollution Control Board	Illinois Pollution Control Board
100 W. Randolph Street	100 W. Randolph Street
Suite 11-500	Suite 11-500
Chicago, Illinois 60601	Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)	(VIA U.S. MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **POST-HEARING COMMENTS OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP** on behalf of the Illinois Environmental Regulatory Group, copies of which are herewith served upon you.

Respectfully submitted,

By: /s/ Katherine D. Hodge
Katherine D. Hodge

Dated: June 8, 2009

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POST-HEARING COMMENTS OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP

NOW COMES the Illinois Environmental Regulatory Group (“IERG”), by and through its attorneys, Alec M. Davis and HODGE DWYER & DRIVER, and submits its Post-Hearing Comments in the above-captioned matter to the Illinois Pollution Control Board (“Board”), stating as follows:

I. INTRODUCTION

The Illinois Environmental Regulatory Group (“IERG”) would like to thank the Illinois Pollution Control Board (“Board”) for the opportunity to submit these comments in regard to the April 28, 2009 hearing, dedicated to the Air Quality Standards Clean-Up rulemaking.

The Illinois Environmental Protection Agency (“Illinois EPA” or “Agency”) has proposed to amend the air quality standards for particulate matter, ozone, and lead codified at 35 Ill. Admin. Code Part 243 (“Part 243”) to “...reflect current national ambient air quality standards established by the U.S. EPA under the federal Clean Air Act.” Statement of Reasons, *In the Matter of: Air Quality Standards Clean-Up: Amendments to 35 Ill. Adm. Code Part 243*, R09-19 at 4 (Ill.Pol.Control.Bd. Dec. 1, 2008). The first hearing held in this matter occurred March 10, 2009. As a result of questions raised at the hearing concerning differences between the proposal and the federal National Ambient Air Quality Standards (“NAAQS”), the Agency made revisions

on April 8, 2009 to more precisely conform its proposal to the form and substance of the United States Environmental Protection Agency's ("U.S. EPA") NAAQS. IERG supports the desire of the Illinois EPA to adopt standards in Illinois that are identical in substance to the NAAQS.

Since the federal NAAQS were first adopted on April 30, 1971, the Illinois EPA and the Board have expressed the intent to adopt Illinois Standards that are substantively identical to the NAAQS. In the Board's opinion in *In the Matter of Proposed Air Quality Standards* (R72-7), adopted on July 10, 1975, the Board discussed the need for statewide ambient air quality standards, and among other things, concluded the following:

...uniformity between state and federal standards is obviously desirable unless there is solid ground for disagreement, especially since we have already devised a plan for achieving federal standards.

In light of the above considerations, the PCB today is proposing adoption of the federal standards.

"Proposed Air Quality Standards," Board Newsletter #47, cited in *In the Matter of Proposed Air Quality Standards*, R72-7 at 4-5 (Ill.Pol.Control.Bd. July 10, 1975).

The Board then proceeded to adopt the federal NAAQS.

The proposal by the Agency in this rulemaking appears to continue the espoused policy to maintain uniformity between state and federal standards, "...unless there is solid ground for disagreement..." IERG supports the Agency's proposal, but would further encourage the Agency and the Board to take this opportunity to update the standards for sulfur oxides, nitrogen dioxide, and carbon monoxide as well.

The air quality standards for sulfur oxides, nitrogen dioxide, and carbon monoxide have not been substantively revised by the U.S. EPA, but important

clarifications have been adopted in recent years that should be incorporated into Illinois' standards to avoid confusion and possible misinterpretation. Following are more specific comments regarding the Agency's proposal and the matter of updating the standards for sulfur oxides, nitrogen dioxide, and carbon monoxide.

II. PM₁₀ AND PM_{2.5} (SECTION 243.120)

IERG suggests the following changes to the Agency's April 8, 2009 revised proposal for the PM₁₀ and PM_{2.5} standards:

- a) PM₁₀ Standards. The primary and secondary ambient air quality standards for PM₁₀ ~~are~~ is a maximum 24-hour average concentration of 150 micrograms per cubic meter. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter is equal to or less than one, as measured and determined in accordance with subsection (b) below.

- b) PM₁₀ Measurement Method. For determining conformance with the PM₁₀ ambient air quality standards, PM₁₀ shall be measured by ~~at~~ the method described in 40 CFR 50, Appendix J (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 micrograms per cubic meter is equal to or less than one, as determined in accordance with ~~The computations necessary for analyzing particulate matter data to determine attainment of the PM₁₀ standards are described in 40 CFR 50, Appendix K (incorporated by reference in Section 243.108).~~

- c) PM_{2.5} Standards. The primary and secondary ambient air quality standards for PM_{2.5} are:
 - 1) An annual arithmetic mean concentration of 15.0 micrograms per cubic meter; ~~and~~ as measured and determined in conformance with subsection (d) below.

 - 2) A maximum 24-hour concentration of 35 micrograms per cubic meter, at the 98th percentile value, ~~and~~ as measured and determined in conformance with subsection (d) below.

- d) PM_{2.5} 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 (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/m³. The computations necessary for analyzing particulate matter data to determine attainment of the PM_{2.5} standards are described in 40 CFR 50, Appendix N (incorporated by reference in Section 243.108).
- 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 of this part, is less than or equal to 35 µg/m³.

III. 8-HOUR OZONE (SECTION 243.125)

IERG suggests the following changes to the Agency's April 8, 2009 revised proposal for the 8-hour ozone standards:

- a) Standards. The primary and secondary ambient air quality standards for ozone are 0.075 parts per million (ppm) daily maximum 8-hour average concentrations, measured and determined in accordance with subsection (b) below.
- b) Measurement Method. ~~For determining conformance with the ozone air quality standard,~~ Ozone shall be measured by the reference method specified by 40 CFR Part 50, Appendix D, or an equivalent method as described in 40 CFR Part 50, Section 50.1, all designated as prescribed by 40 CFR Part 53 (2003); The primary and secondary ambient air quality standards are met when the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.075 ppm, and as determined using the Interpretation of the NAAQS for O₃, 40 CFR Part 50, Appendix P, (incorporated by reference in Section 243.108). ~~73 Fed. Reg. 16436 (March 27, 2008).~~

IV. LEAD (SECTION 243.126)

IERG suggests the following changes to the Agency's April 8, 2009 revised proposal for the lead standards:

- a) Standard. The primary and secondary ambient air quality standards for lead ~~and its compounds are~~ 0.15 micrograms per cubic meter, maximum arithmetic mean over a rolling three calendar month period ~~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 by a reference method based on 40 CFR 50, Appendix G or Appendix Q and designated in accordance with 40 CFR 53 ~~the atomic absorption spectrometry or an equivalent method designated in accordance with 40 CFR 53, as described in 40 CFR 50 Appendices G and Q,~~ as incorporated by reference in Section 243.108 of this Part. The primary and secondary ambient air quality standards are met when the maximum arithmetic 3-month mean concentration for a 3-year period is less than or equal to 0.15 micrograms per cubic meter as determined in accordance with 40 CFR 50, Appendix R ~~shall be determined in accordance with Appendix R of Part 50 as~~ (incorporated by reference in Section 243.108 of this Part).

V. SULFUR OXIDES (SECTION 243.122)

The current sulfur oxides standards in Section 243.122 were adopted by the Board on July 10, 1975, and according to the Board, the standards were "...identical to the federal standards." Board Opinion, *In the Matter of Proposed Air Quality Standards*, R72-7 at 14.

The U.S. EPA has reviewed and revised the criteria upon which its sulfur oxides air quality standards are based and has determined that revisions of the standards were not warranted, other than several minor technical changes. 61 Fed. Reg. 25566 (May 22,

1996). These changes included restating the primary and secondary standards in terms of parts per million rather than micrograms per cubic meter, adding explicit rounding conventions, and specifying data completeness and handling conventions. The U.S. EPA also declared its intention to retain the block averaging convention for the 24-hour, annual, and 3-hour standards, and therefore, added clarifying language to eliminate future confusion in this regard. *Id.* at 25576.

IERG suggests that Illinois' sulfur oxides standard be stated solely in terms of parts per million to be consistent with, and improve understanding of, U.S. EPA's 1996 determination. The State's current standard is expressed in micrograms per cubic meter and parenthetically in parts per million. The number of significant digits is not the same between the two units of measure, which affects rounding conventions that can result in misinterpretation of data. Further, for the purpose of its own data handling, the Agency measures, interprets, and reports sulfur dioxide data in terms of parts per million. At the April 28, 2009 hearing dedicated to this matter, the Agency seemed to be making a case for retaining the standard in micrograms per cubic meter, implying that not doing so would somehow impact its modeling program. Hearing Transcript, *In the Matter of: Air Quality Standards Clean-Up: Amendments to 35 Ill. Adm. Code Part 243*, R09-19 at 24, 29, 31 (Ill.Pol.Control.Bd. April 28, 2009) (cited hereafter as "Tr."). IERG believes this concern to be overstated. The modeling program is a planning tool and is not a recognized protocol for determining compliance with the air quality standards. Whether the State's air quality standards are expressed in parts per million or micrograms per cubic meter should have no impact on the Agency's ability to conduct modeling.

Similarly, IERG believes that Illinois needs to clearly address the rounding convention in its sulfur oxides rule. The U.S. EPA has amended its rule to clarify that the convention - to three decimal places (fractional parts equal to or greater than 0.0005 ppm shall be rounded up) - is applicable to the primary annual sulfur oxide NAAQS. 40 C.F.R. § 50.4(a) (2008); *see also* 40 C.F.R. §§ 50.4(b), 50.5(a). Illinois' adoption of the same clarification will not only help avoid confusion, but it will also result in the codification of the method the Agency currently uses.

The U.S. EPA has provided further clarification in the sulfur oxides NAAQS by specifying data completeness and data handling criteria. For example, the U.S. EPA specifies that at least 18 of 24 hourly values must be available to compute a 24 hour average. 40 C.F.R. § 50.4(d). It further specifies how missing data and other similar issues are to be handled. *Id.* IERG understands that the Illinois EPA currently uses these conventions. Incorporating them into the State's sulfur oxides standard would simply formalize the current practice the Agency follows. IERG encourages the Agency and the Board to include the U.S. EPA's data completeness and data handling criteria into the State's sulfur oxides rule.

In the November 15, 1994 Federal Register Notice reproposing the sulfur oxides standard, the U.S. EPA addressed the issue of block averages versus running averages for the 3-hour, 24-hour and annual standards. 58 Fed. Reg. 58958 (Nov. 15, 1994). In Section V.D., the U.S. EPA stated:

Although the wording of the original 24-hour, 3-hour, and annual SO₂ standards was ambiguous on the matter, the earliest actions of the EPA signify that the block averaging convention was intended for these

standards (OAQPS, 1986), and block averages have generally been used in implementing the standards.

Id. The U.S. EPA then stated, “[t]o eliminate any future questions on this aspect of the standards, clarifying language is being proposed in the regulation (40 CFR 50.4 and 50.5).” *Id.* The NAAQS now reads, in part: “[t]he 24-hour averages shall be determined from successive nonoverlapping 24-hour blocks starting at midnight each calendar day....” 40 C.F.R. § 50.4(b). The standard similarly defines the averaging periods for the annual and 3-hour standards. In formalizing the block-averaging convention, the U.S. EPA also explicitly recognized that “the use of the alternative, running averages, would represent a tightening of the standards....” 61 Fed. Reg. at 25576.

IERG maintains that the wording of the State’s sulfur oxides standard in regard to averaging time is ambiguous. Mr. David Kolaz, testifying on behalf of IERG at the April 28, 2009 hearing, stated that the Illinois EPA has been interpreting the State standard as based on a running average time period, while the U.S. EPA interprets the same data using block averages. Tr. at 11-14, Exhibits 2 and 3; *see also* Pre-Filed Testimony of David J. Kolaz, *In the Matter of: Air Quality Standards Clean-Up: Amendments to 35 Ill. Adm. Code Part 243*, R09-19 at 2-3 and Attachment 1 (Ill.Pol.Control.Bd. April 14, 2009) (“Kolaz Testimony”). At hearing, the Illinois EPA seemed to suggest the discrepancy was irrelevant, as states are permitted to have standards stricter than the federal standards. Tr. at 19-20 and 25-26. IERG does not deny that this is the case. However, upon review of the Board records relating to the Illinois sulfur oxides standard, IERG has been unable to locate any instance where the Illinois EPA stated that its intent was to have a standard for sulfur oxides that is more stringent than the federal standard.

Nor is there any apparent record of justification for such a more stringent standard. Rather, as described above, the promulgation of the State's sulfur oxides standard was based on being identical to that of the U.S. EPA. Because U.S. EPA's standard is based on a block average interpretation, IERG suggests that Section 243.122 be amended accordingly to remove the ambiguity. In the alternative, should the Agency not concur with the change to a block averaging interpretation, it should be prepared to justify the need for a more stringent state than federal standard.

VI. NITROGEN DIOXIDE (SECTION 243.124)

The U.S. EPA's air quality standard for nitrogen dioxide was last updated in 1985. 50 Fed. Reg. 25544 (June 19, 1985). The standard includes block averaging, rounding convention, and data completeness and handling methodologies similar in concept to those described in greater detail above for sulfur oxides. The standard is also stated in terms of parts per million and stated parenthetically in micrograms per cubic meter. In stating the parts per million standard, the U.S. EPA included an additional significant digit, expressing it as 0.053, instead of 0.05, parts per million.

As pointed out at the April 28, 2009 hearing by Mr. David Kolaz on behalf of IERG, the Illinois EPA currently uses 0.053 parts per million as the State standard in its annual air quality reports. Tr. at 29; Kolaz Testimony at 4-5. Accordingly, IERG recommends that the Agency and the Board modify Illinois' codified nitrogen dioxide standard (currently 0.05 ppm) to conform to the NAAQS. IERG would further recommend that the State standard not include the micrograms per cubic meter parenthetical, as it does nothing to add clarity. The lack of need for inclusion of the

parenthetical micrograms per cubic meter is further supported by the U.S. EPA's practice to not express the standards in both parts per million and micrograms per cubic meter for gaseous pollutants since the time the nitrogen dioxide NAAQS was last updated. For example, the 1-hour NAAQS ozone standard was stated in parts per million and parenthetically in micrograms per cubic meter when it was published in 1979. 44 Fed. Reg. 8202. The 8-hour NAAQS ozone standard published on July 18, 1997 was expressed solely in parts per million. 62 Fed. Reg. 38856. Also, as mentioned earlier, the sulfur oxides standard revised on May 22, 1996 was expressed only in terms of parts per million. 61 Fed. Reg. 25566. The latest ozone standard adopted on March 27, 2008 is expressed only in parts per million. 73 Fed. Reg. 16436. Clearly, the U.S. EPA is directing attention to reliance on the "parts per million" nomenclature. For Illinois to delete the micrograms per cubic meter reference for nitrogen dioxide will not create a substantive inconsistency between the State and federal standards.

VII. CARBON MONOXIDE (SECTION 243.123)

The U.S. EPA last made changes to its carbon monoxide NAAQS in 1985, choosing to express the standard in parts per million and parenthetically in milligrams per cubic meter. 50 Fed. Reg. 37501 (Sept. 13, 1985). This is the reverse of the way it is currently expressed in the State standard. At that time, the U.S. EPA also updated the standard to include data completeness and handling criteria. Nothing was stated about block averages, but the U.S. EPA uses a running non-overlapping approach to interpreting compliance with the 8-hour standard. IERG advocates expressing the carbon monoxide standard solely in terms of parts per million for the reasons specified in the

above discussions of sulfur oxides and nitrogen dioxide. We also suggest that the rounding convention and data completeness and data handling components of the U.S. EPA rule be incorporated. Lastly, we believe that the State rule should also specify that the 8-hour standard is determined using non-overlapping running averages.

VIII. CONCLUSION

In summary, IERG supports the efforts of the Agency to update the State's air quality standards. This effort, however, should be extended beyond the Agency's initial proposal to include clarifications to Illinois' sulfur oxides, nitrogen dioxide, and carbon monoxide standards. This will afford the public and regulated community a much clearer understanding of the State's air quality standards. IERG further believes the standards will then more accurately reflect the methods and techniques that the Agency uses to interpret the standards, with one exception. Unlike its current practice of interpreting the sulfur oxides standard on a running average basis, the Agency will need to adopt the block averaging approach.

IERG offers these comments to facilitate achieving the intent of the proposed rulemaking – to provide conformity between Illinois’ and the U.S. EPA’s standards, as stated by the Board at the time the State’s standards were initially adopted. IERG appreciates the opportunity to comment. We will be pleased to answer any questions that may arise.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
REGULATORY GROUP

Dated: June 8, 2009

By: /s/Alec M. Davis
One of Its Attorneys

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IERG-001/R Dockets/Filings/R09-19/IERG’s Post-Hearing Comments

CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached POST-HEARING COMMENTS OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP on behalf of the Illinois Environmental Regulatory Group, upon:

Mr. John T. Therriault
Assistant Clerk of the Board
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via electronic mail on June 8, 2009; and upon:

Mr. Timothy J. Fox
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by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on June 8, 2009.

/s/ Katherine D. Hodge
Katherine D. Hodge