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## **TITLE 326 AIR POLLUTION CONTROL BOARD**

LSA Document #03-228(F)

### **DIGEST**

Adds 326 IAC 1-2-52.2, 326 IAC 1-2-52.4, and 326 IAC 1-2-82.5 and amends 326 IAC 1-2-52 and 326 IAC 1-3-4 concerning particulate matter definitions and standards. Effective 30 days after filing with the secretary of state.

### **HISTORY**

First Notice of Comment Period: September 1, 2003, Indiana Register (26 IR 3961).

Second Notice of Comment Period: January 1, 2004, Indiana Register (27 IR 1301).

Change of Notice of First Hearing: February 1, 2004, Indiana Register (27 IR 1613).

Change of Notice of First Hearing: March 1, 2004, Indiana Register (27 IR 1936).

Date of First Hearing: May 5, 2004.

Opened and Continuation of First Hearing: June 2, 2004.

Change of Notice of First Hearing: June 1, 2004, Indiana Register (27 IR 1301).

Proposed Rule and Notice of Second Hearing: July 1, 2004 (27 IR 3119).

Third Comment Period: July 1, 2004 (27 IR 3122).

Date of Second Hearing: September 1, 2004.

**326 IAC 1-2-52**  
**326 IAC 1-2-52.2**  
**326 IAC 1-2-52.4**

**326 IAC 1-2-82.5**  
**326 IAC 1-3-4**

SECTION 1. 326 IAC 1-2-52 IS AMENDED TO READ AS FOLLOWS:

#### **326 IAC 1-2-52 “Particulate matter” defined**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

**Affected:** IC 13-15; IC 13-17

Sec. 52. “**Particulate matter**” means any airborne finely divided solid or liquid material, excluding uncombined water, with an aerodynamic diameter smaller than one hundred (100) micrometers ( $\mu\text{m}$ ).

(1) **PM<sub>10</sub>**: Any particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers ( $\mu\text{m}$ ) as measured by an applicable reference method specified in 40 CFR Part 50 or by an equivalent or alternative method approved by the commissioner.

(2) **Total suspended particulate (TSP)**: Any particulate matter as measured by the method described in Appendix B of 40 CFR Part 50.

*(Air Pollution Control Board; 326 IAC 1-2-52; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2374; filed Apr 13, 1988, 3:35 p.m.: 11 IR 3020; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471)*

SECTION 2. 326 IAC 1-2-52.2 IS ADDED TO READ AS FOLLOWS:

#### **326 IAC 1-2-52.2 “PM<sub>2.5</sub>” defined**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

**Affected:** IC 13-15; IC 13-17

Sec. 52.2. “**PM<sub>2.5</sub>**” means particulate matter with an aerodynamic diameter less than or equal to a nominal two and five-tenths (2.5) micrometers ( $\mu\text{m}$ ). *(Air Pollution Control Board; 326 IAC 1-2-52.2; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471)*

SECTION 3. 326 IAC 1-2-52.4 IS ADDED TO READ AS FOLLOWS:

**326 IAC 1-2-52.4 “PM<sub>10</sub>” defined**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

**Affected:** IC 13-15; IC 13-17

**Sec. 52.4. “PM<sub>10</sub>” means any particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (µm) as measured by an applicable reference method specified in 40 CFR Part 50 or by an equivalent or alternative method approved by the commissioner. (Air Pollution Control Board; 326 IAC 1-2-52.4; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471)**

SECTION 4. 326 IAC 1-2-82.5 IS ADDED TO READ AS FOLLOWS:

**326 IAC 1-2-82.5 “Total suspended particulate” or “TSP” defined**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

**Affected:** IC 13-15; IC 13-17

**Sec. 82.5. “Total suspended particulate” or “TSP” means any particulate matter as measured by the method described in Appendix B of 40 CFR Part 50. (Air Pollution Control Board; 326 IAC 1-2-82.5; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471)**

SECTION 5. 326 IAC 1-3-4 IS AMENDED TO READ AS FOLLOWS:

**326 IAC 1-3-4 Ambient air quality standards**

**Authority:** IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

**Affected:** IC 13-15; IC 13-17

**Sec. 4. (a) ~~The following ambient~~ All measurements of air quality that are expressed as mass per unit volume, micrograms per cubic meter (µg/m<sup>3</sup>), other than for the particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) standards, shall be corrected to a reference temperature of twenty-five (25) degrees Celsius and to a reference pressure of seven hundred sixty (760) millimeters of mercury (one thousand thirteen and two-tenths (1,013.2) millibars), as micrograms per cubic meter (µg/m<sup>3</sup>). Measurements of PM<sub>10</sub> and PM<sub>2.5</sub>, for purposes of the standards contained in subsection (b)(7) and (b)(8), shall be reported based on actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.**

(b) Ambient air quality standards are as follows:

(1) Sulfur oxides as sulfur dioxide (SO<sub>2</sub>) requirements are as follows:

(A) For primary standards, the following values shall represent the maximum permissible ambient air quality levels:

(i) Eighty (80) µg/m<sup>3</sup> (three-hundredths (0.03) parts per million (ppm)) annual arithmetic mean **not to be exceeded in a calendar year.**

(ii) Three hundred sixty-five (365) µg/m<sup>3</sup> (fourteen-hundredths (0.14) ppm) maximum twenty-four (24) hour average concentration not to be exceeded more than ~~one (1) day~~ **once per calendar year. The twenty-four (24) hour averages shall be determined from successive nonoverlapping three (3) hour blocks starting at midnight each calendar day.**

(B) For secondary standards, the following value shall represent the maximum permissible ambient air quality levels: one thousand three hundred (1,300) µg/m<sup>3</sup> (five-tenths (0.5) ppm) maximum three (3) hour concentration not to be exceeded more than once per year. **The three (3) hour averages shall be determined from successive nonoverlapping three (3) hour blocks starting at midnight each calendar day.**

(C) SO<sub>2</sub> values may be converted to ppm using the conversion factor two thousand six hundred twenty (2,620) µg/m<sup>3</sup> = one (1) ppm.

(2) Total suspended particulates (TSP) requirements are as follows:

(A) For primary standards, the following values shall represent the maximum permissible ambient air quality levels:

(i) Seventy-five (75) µg/m<sup>3</sup> annual geometric mean.

(ii) Two hundred sixty (260) µg/m<sup>3</sup> maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(B) For secondary standards, the following value shall represent maximum permissible ambient air quality levels: one hundred fifty (150) µg/m<sup>3</sup> maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(3) Carbon monoxide (CO) requirements are as follows:

(A) For primary and secondary standards, the following values shall represent the maximum permissible ambient air quality levels:

(i) Ten (10) milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ) (ten thousand (10,000)  $\mu\text{g}/\text{m}^3$ ) (nine (9) ppm) maximum eight (8) hour average concentration not to be exceeded more than once per year.

(ii) Forty (40)  $\text{mg}/\text{m}^3$  (forty thousand (40,000)  $\mu\text{g}/\text{m}^3$ ) (thirty-five (35) ppm) maximum one (1) hour average concentration not to be exceeded more than once per year.

(B) CO values may be converted to ppm using the conversion factor one thousand one hundred forty-five ( $1,145$ )  $\mu\text{g}/\text{m}^3 = \text{one (1) ppm}$ .

(4) Ozone ( $\text{O}_3$ ) requirements ~~shall be~~ **are** as follows:

(A) For the one (1) hour ozone standards, the level of the one (1) hour primary and secondary ambient air quality standards for ozone measured by a reference method based on 40 CFR 50, Appendix D\* and designated in accordance with 40 CFR 53\* is twelve-hundredths (0.12) ppm (two hundred thirty-five (235)  $\mu\text{g}/\text{m}^3$ ). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above twelve-hundredths (0.12) ppm (two hundred thirty-five (235)  $\mu\text{g}/\text{m}^3$ ) is equal to or less than one (1) as determined by 40 CFR 50, Appendix H\*.

(B) For the eight (8) hour ozone standards, the:

(i) level of the eight (8) hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR 50, Appendix D\* and designated in accordance with 40 CFR 53\*, is eight-hundredths (0.08) ppm, daily maximum eight (8) hour average; and

(ii) eight (8) hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth highest daily maximum eight (8) hour average ozone concentration is less than or equal to eight-hundredths (0.08) ppm as determined in accordance with 40 CFR 50, Appendix I\*.

(C)  $\text{O}_3$  values may be converted to ppm using the conversion factor one thousand nine hundred sixty-five ( $1,965$ )  $\mu\text{g}/\text{m}^3 = 1.0$  ppm.

(5) Nitrogen dioxide ( $\text{NO}_2$ ) requirements ~~shall be~~ **are** as follows:

(A) For primary and secondary standards, the following value shall represent the maximum permissible ambient air quality level: one hundred (100)  $\mu\text{g}/\text{m}^3$  (five-hundredths (0.05) ~~(0.05)~~ **(0.053)** [sic.] ppm) annual arithmetic mean **concentration in a calendar year**.

(B)  $\text{NO}_2$  values may be converted to ppm using the conversion factor one thousand eight hundred eighty ( $1,880$ )  $\mu\text{g}/\text{m}^3 = \text{one (1) ppm}$ .

(6) Lead (Pb): For primary and secondary standards, the following value shall represent the maximum permissible ambient air quality level: one and five-tenths (1.5) micrograms lead per cubic meter of air ( $\mu\text{g}$  of Pb/ $\text{m}^3$ ), averaged over a calendar quarter and measured as elemental lead.

(7)  $\text{PM}_{10}$ : For primary and secondary standards, the following values shall represent the maximum permissible ambient air quality levels:

(A) Fifty (50)  $\mu\text{g}/\text{m}^3$  annual arithmetic mean. The standards are attained when the expected annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, Appendix K\*, is less than or equal to fifty (50)  $\mu\text{g}/\text{m}^3$ .

(B) One hundred fifty (150)  $\mu\text{g}/\text{m}^3$  maximum twenty-four (24) hour average concentration. The standards are attained when the expected number of days per calendar year with a twenty-four (24) hour average concentration above one hundred fifty (150)  $\mu\text{g}/\text{m}^3$ , as determined in accordance with 40 CFR 50, Appendix K\*, is equal to or less than one (1).

(8)  $\text{PM}_{2.5}$ : **For primary and secondary standards, the following values shall represent the maximum permissible ambient air quality levels:**

(A) **Fifteen (15) micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual arithmetic mean concentration. The standards are attained when the annual arithmetic mean concentration is less than or equal to fifteen (15)  $\mu\text{g}/\text{m}^3$ , as determined in accordance with 40 CFR 50, Appendix N\* and measured in the ambient air as  $\text{PM}_{2.5}$  by either:**

**(i) a reference method based on 40 CFR 50, Appendix L\*, and designated in accordance with 40 CFR 53\*; or**

**(ii) an equivalent method designated in accordance with 40 CFR 53\*.**

(B) **Sixty-five (65)  $\mu\text{g}/\text{m}^3$  twenty-four (24) hour average concentration. The standards are attained when the ninety-eighth percentile twenty-four (24) hour concentration is less than or equal to sixty-five (65) micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), as determined in accordance with 40 CFR 50, Appendix N and measured in the ambient air as  $\text{PM}_{2.5}$  by either:**

**(i) a reference method based on 40 CFR 50, Appendix L\*, and designated in accordance of 40 CFR 53\*; or**

**(ii) an equivalent method designated in accordance with 40 CFR 53\*.**

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. (*Air Pollution Control Board; 326 IAC 1-3-4; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2378; filed Apr 13, 1988, 3:35 p.m.: 11*

*IR 3020; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed May 21, 2002, 10:20 a.m.: 25 IR 3055; filed Mar 9, 2004, 3:45 p.m.: 27 IR 2224; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471)*

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