

Chapter 3745-25 Ambient Air Quality and Emergency Episode Standards

3745-25-01 Definitions.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (B) of this rule titled “Referenced materials.”]

(A) The following definitions apply to this chapter:

(1) “PM₁₀” means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers as measured by a reference method based on 40 CFR Part 50, Appendix J and designated in accordance with 40 CFR Part 53 or an equivalent method designated in 40 CFR Part 53.

(2) “PM_{2.5}” means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured either by a reference method that is based on 40 CFR Part 50, Appendix L and designated in accordance with 40 CFR Part 53 or by an equivalent method designated in accordance with 40 CFR Part 53.

(3) “Primary ambient air quality standard” means the levels of air quality which are necessary, with an adequate margin of safety, to protect the public health.

(4) “Secondary ambient air quality standards” means the levels of air quality which are necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

(B) Referenced materials. This chapter includes references to certain matter or materials. The text of the referenced materials is not included in the rules contained in this chapter. Information on the availability of the referenced materials as well as the date of, and/or the particular edition or version of the material is included in this rule. For materials subject to change, only the specific versions specified in this rule are referenced. Material is referenced as it exists on the effective date of this rule. Except for subsequent annual publication of existing (unmodified) Code of Federal Regulation compilations, any amendment or revision to a referenced document is not applicable unless and until this rule has been amended to specify the new dates.

(1) Availability. The referenced materials are available as follows:

(a) Code of Federal Regulations. Information and copies may be obtained by writing to: “Superintendent of Documents, Attention: New Orders, PO Box 371954, Pittsburgh, PA 15250-7954.” The full text of the CFR is also available in electronic format at www.access.gpo.gov/nara/cfr/. The CFR compilations are also available for inspection and copying at most public libraries and “The State Library of Ohio.”

(2) Referenced materials:

(a) 40 CFR Part 50, Appendix A; “Reference Method for the Determination of Sulfur Dioxide in the Atmosphere (Pararosaniline Method);” 47 FR 54899, Dec. 6, 1982; 48 FR 17355, Apr. 22, 1983.

(b) 40 CFR Part 50, Appendix I; “Interpretation of the 8-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone”; 62 FR 38895, July 18, 1997.

(c) 40 CFR Part 50, Appendix J; “Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere;” 52 FR 24664, July 1, 1987; 52 FR 29467, Aug. 7, 1987

(d) 40 CFR Part 50, Appendix K; “Interpretation of the National Ambient Air Quality Standards for Particulate Matter”; 71 FR 61224, Oct. 17, 2006.

(e) 40 CFR Part 50, Appendix L; “Reference Method for the Determination of Fine Particulate Matter as PM 2.5 in the Atmosphere;” 62 FR 38714, July 18, 1997, as amended at 64 FR 19719, Apr. 22, 1999; 71 FR 61226, Oct. 17, 2006.

(f) 40 CFR Part 50, Appendix N; “Interpretation of the National Ambient Air Quality Standards for PM 2.5 ;” 71 FR 61227, Oct. 17, 2006, as amended at 73 FR 1502, Jan. 9, 2008.

(g) 40 CFR Part 53; “Ambient Air Monitoring Reference and Equivalent Methods;” as published in the July 1, 2008 Code of Federal Regulations.

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3745-25-02 Ambient Air Quality Standards.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (B) of rule [3745-25-01](#) of the Administrative Code titled "Referenced materials."]

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.

(A) Particulate matter:

(1) For the purpose of determining attainment of the primary and secondary ambient air quality standards for particulate matter applicable throughout the state of Ohio, particulates shall be measured in the ambient air as both particles with an aerodynamic diameter less than or equal to a nominal ten micrometers (PM₁₀) and particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5}).

(2) The level of the primary and secondary twenty-four-hour ambient air quality standards for PM₁₀ is one hundred fifty micrograms per cubic meter, twenty-four-hour average concentration. The standards are attained when the expected number of days per calendar year with a twenty-four-hour average concentration above one hundred fifty micrograms per cubic meter, as determined in accordance with 40 CFR Part 50, Appendix K, is equal to or less than one.

(3) The level of the primary and secondary twenty-four-hour standards for PM_{2.5} is thirty-five micrograms per cubic meter, twenty-four-hour average concentration. The standards are attained when the ninety-eighth percentile twenty-four-hour average concentration, as determined in accordance with 40 CFR Part 50, Appendix N, is less than or equal to thirty-five micrograms per cubic meter.

(4) The level of the primary and secondary annual standards for PM_{2.5} is fifteen micrograms per cubic meter, annual average concentration. The standards are attained when the three-year average concentration as determined in accordance with 40 CFR Part 50, Appendix N, is less than or equal to fifteen micrograms per cubic meter.

(B) Sulfur dioxide:

(1) The primary ambient air quality standards for sulfur dioxide applicable throughout the state of Ohio shall be as follows:

(a) The maximum annual arithmetic mean concentration shall not exceed eighty micrograms per cubic meter (0.03 parts per million by volume).

(b) The maximum twenty-four-hour concentration not to be exceeded more than once per year shall be three hundred sixty-five micrograms per cubic meter (0.14 parts per million by volume).

(2) The secondary ambient air quality standard for sulfur dioxide applicable throughout the state of Ohio shall be a maximum three-hour concentration not to be exceeded more than once per year of thirteen hundred micrograms per cubic meter (0.50 parts per million by volume).

(3) For purposes of ascertaining, defining and measuring ambient air quality, concentrations of sulfur dioxide shall be determined either through twenty-four-hour intermittent sampling utilizing the "Reference Method" in accordance with in 40 CFR Part 50, Appendix A or through the use of a continuous sampling and recording device which has been designated an "Equivalent Method" in accordance with 40 CFR Part 53.

(C) Carbon monoxide:

Ambient air quality standards for carbon monoxide, applicable throughout the state of Ohio, shall be as follows:

(1) The maximum eight hour arithmetic mean concentration not to be exceeded more than once per year shall be nine parts per million by volume.

(2) The maximum one hour arithmetic mean concentration not to be exceeded more than once per year shall be thirty-five parts per million by volume.

(D) Ozone:

The ambient air quality standard for ozone applicable throughout the state of Ohio, shall be the three year average of the annual fourth-highest daily maximum eight-hour arithmetic mean concentration, not to exceed 0.08 parts per million by volume. The three year average of the fourth high concentrations shall be determined in accordance with the procedures in 40 CFR Part 50, Appendix I.

(E) Nitrogen dioxide:

The ambient air quality standard for nitrogen dioxide applicable throughout the state of Ohio shall be as follows: The maximum annual arithmetic mean concentration shall not exceed 0.053 parts per million (one hundred (100) micrograms per cubic meter).

(F) Lead:

(1) The ambient air quality standards for lead, applicable throughout the state of Ohio, shall be a maximum arithmetic mean of 1.5 micrograms per cubic meter during any calendar quarter.

(2) For purposes of paragraph (F)(1) of this rule, the four calendar quarters are as follows: first quarter – January, February, March; second quarter – April, May, June; third quarter – July, August, September; and fourth quarter – October, November, December.

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3745-25-03 Air Pollution Emergencies and Episode Criteria.

The purpose of rules [3745-25-02](#) to [3745-25-05](#) of the Administrative Code is to prevent the excessive buildup of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these air contaminants on the health of persons.

(A) Conditions justifying the proclamation of an air pollution “Alert”, air pollution “Warning”, or air pollution “Emergency” shall be deemed to exist whenever the director determines that the accumulation of air contaminants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. In making this determination, the director will be guided by the episode stage criteria in paragraphs (B) to (F) of this rule.

(B) “Air pollution forecast”: An internal watch by the Ohio environmental protection agency shall be actuated by a national weather service advisory that an “Atmospheric Stagnation Advisory” is in effect or the equivalent local forecast of stagnant atmospheric condition. The air pollution forecast for photochemical oxidants shall take into consideration, but not be limited to, ambient temperatures, surface winds, and ultra-violet solar radiation levels.

(C) “Alert”: The “Alert” level is that concentration of air contaminants at which first stage control actions are to begin. An “Alert” will be declared when any one of the levels specified in paragraphs (C)(1) to (C)(5) of this rule is reached at any monitoring site and meteorological conditions are such that the air contaminant concentrations can be expected to remain at the specified level or reoccur during the next twenty-four hours unless control actions are taken:

(1) Sulfur dioxide: eight hundred micrograms per cubic meter (0.3 parts per million by volume), twenty-four-hour average; or

(2) PM10: three hundred fifty micrograms per cubic meter, twenty-four-hour average; or

(3) Carbon monoxide: seventeen milligrams per cubic meter (fifteen parts per million by volume), eight-hour average; or

(4) Photochemical oxidants measured as ozone: four hundred micrograms per cubic meter (0.2 parts per million by volume), one-hour average; or

(5) Nitrogen dioxide:

(a) One thousand thirty micrograms per cubic meter (0.6 parts per million by volume), one-hour average; or

(b) Two hundred eighty-two micrograms per cubic meter (0.15 parts per million by volume), twenty-four-hour average.

(D) “Warning”: The “Warning” level indicates that air quality is continuing to degrade and that additional control measures are necessary. A “Warning” will be declared when any one of the levels specified in paragraphs (D)(1) to (D)(5) of this rule is reached at any monitoring site and meteorological conditions are such that the air contaminant concentrations can be expected to

remain at the specified levels or reoccur during the next twenty-four hours unless control actions are taken:

(1) Sulfur dioxide: one thousand six hundred micrograms per cubic meter (0.6 parts per million by volume), twenty-four-hour average; or

(2) PM10: four hundred twenty micrograms per cubic meter, twenty-four-hour average; or

(3) Carbon monoxide: thirty-four milligrams per cubic meter (thirty parts per million by volume), eight-hour average; or

(4) Photochemical oxidants measured as ozone: eight hundred micrograms per cubic meter (0.4 parts per million by volume), one-hour average; or

(5) Nitrogen dioxide:

(a) Two thousand two hundred sixty micrograms per cubic meter (1.2 parts per million by volume), one-hour average; or

(b) Five hundred sixty-five micrograms per cubic meter (0.3 parts per million by volume), twenty-four-hour average.

(E) “Emergency”: The “Emergency” level indicated that air quality is continuing to degrade to a level that should never be reached and that most stringent control actions are necessary. An “Emergency” will be declared when any one of the levels specified in paragraph (E)(1) to (E)(5) of this rule is reached at any monitoring site:

(1) Sulfur dioxide: two thousand one hundred micrograms per cubic meter (0.8 parts per million by volume), twenty-four-hour average; or

(2) PM10: five hundred micrograms per cubic meter, twenty-four-hour average; or

(3) Carbon monoxide: forty-six milligrams per cubic meter (forty parts per million by volume); eight-hour average, or

(4) Photochemical oxidants measured as ozone: One thousand micrograms per cubic meter (0.5 parts per million by volume), one-hour average; or

(5) Nitrogen dioxide:

(a) Three thousand micrograms per cubic meter (1.5 parts per million by volume), one-hour average; or

(b) Seven hundred fifty micrograms per cubic meter (0.4 parts per million by volume), twenty-four-hour average.

(F) “Termination”: Once declared, any episode stage reached by application of these criteria will remain in effect until the criteria for that episode stage are no longer met. At such time, the next

lower episode stage will be assumed or the episode may be terminated completely if no episode stage criteria are met.

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3745-25-04 Air Pollution Emergency Emission Control Action Programs.

(A) Any person responsible for the operation of a source of air contaminants which emits 0.25 tons per day or more of air contaminants for which air quality standards have been adopted shall prepare emission control action programs, consistent with good industrial practices and safe operating procedures, for reducing the emission of air contaminants into the ambient air during periods of an air pollution “Alert”, air pollution “Warning”, and air pollution “Emergency”. Emission control action programs shall be designed to reduce or eliminate emissions of air contaminants into the ambient air in accordance with the objectives set forth in tables 1 to 5 of the appendix to this rule.

(B) Emission control action programs required by paragraph (A) of this rule shall be in writing and show the source of air contamination, the approximate amount of reduction of air contaminants, the approximate time required to effect the program, a brief description of the manner in which the reduction will be achieved during each stage of an air pollution episode, and such other information as the director shall deem pertinent.

(C) Emission control action programs shall be filed with the director at the following times:

(1) Existing sources as of December 15, 1978 – shall file not later than June 15, 1979;

(2) New sources that are, or will be, part of a facility, as defined in Chapter 3745-77 of the Administrative Code, and that are required to obtain a Title V permit under Chapter 3745-77 of the Administrative Code – shall file with an application for a Title V permit, in accordance with rule [3745-77-04](#) of the Administrative Code;

(3) New sources not part of a facility, as defined in Chapter 3745-77 of the Administrative Code, and that are not required to obtain a Title V permit under Chapter 3745-77 of the Administrative Code – shall file with an application for a permit-to-install and operate, in accordance with rule [3745-31-02](#) of the Administrative Code.

(D) During a condition of an air pollution “Alert”, air pollution “Warning”, and air pollution “Emergency” emission control action programs required by paragraph (A) of this rule shall be made available on the premises to any person authorized to enforce the provisions of the emergency procedure.

(E) Emission control action programs as required by paragraph (A) of this rule shall be submitted to the director upon request within thirty days of the receipt of such request; such emission control action programs shall be subject to review and approval by the director. If, in the opinion of the director, such emission control action programs do not effectively carry out the objectives as set forth in table 1 to 5 of the appendix to this rule, the director may disapprove said emission control action programs, state the reason for disapproval and order the preparation of amended emission control action programs within the time period specified in the order.

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Appendix – Table 1 Emission Reduction Objectives For Particulate Matter

3745-25-05 Air Pollution Emergency Orders.

(A) The following orders may be issued by the director upon his/her declaration that an air pollution episode exists for any air contaminants for which air quality standards have been adopted:

(1) Air “Alert”:

(a) Any one or combination of air contaminants: Any person responsible for the operation of a source of air contamination as set forth in paragraph (A) of rule [3745-25-04](#) of the Administrative Code shall take all air pollution “Alert” actions as required for such source of air contamination; and shall particularly put into effect, the emission control action programs for an air pollution “Alert”.

(b) Suspended PM10.

(i) There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

(ii) The use of incinerators for the disposal of any form of solid waste will be limited to the hours between twelve p.m. and four p.m.

(iii) Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between twelve p.m. and four p.m.

(c) Nitrogen oxides, carbon monoxide, hydrocarbons and photo-chemical oxidants measured as ozone:

(i) There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

(ii) The use of incinerators for the disposal of any form of solid waste will be limited to the hours between twelve p.m. and four p.m.

(iii) Persons operating motor vehicles shall be strongly encouraged to eliminate the unnecessary use of automobiles, motorcycles, light-duty trucks and vans, and recreational vehicles.

(2) Air pollution “Warning”:

(a) Any one or combination of air contaminants: Any person responsible for the operation of a source of air contamination as set forth in paragraph (A) of rule [3745-25-04](#) of the Administrative Code shall take all air pollution “Warning” actions as required for such source of air contamination; and shall particularly put into effect, the emission control action programs for an air pollution “Warning”.

(b) Suspended PM10:

(i) There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.

(ii) The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.

(iii) Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of twelve p.m. and four p.m.

(c) Nitrogen oxides, carbon monoxide, hydrocarbons and photo-chemical oxidants measured as ozone:

- (i) There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
- (ii) The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.
- (iii) Persons operating motor vehicles shall be strongly encouraged to eliminate the unnecessary use of automobiles, motorcycles, light-duty trucks and vans, and recreational vehicles. Citizens who travel to and from work between the hours of six a.m. and six p.m. are urged to car-pool or utilize public transportation.
- (iv) For carbon monoxide “Warnings,” persons operating motor vehicles shall be encouraged to avoid the air pollution “Warning” area.

(3) Air pollution “Emergency”:

(a) Any one or a combination of contaminants:

- (i) Any person responsible for the operation of a source of air contamination as described in paragraph (A) of rule [3745-25-04](#) of the Administrative Code shall take all air pollution “Emergency” actions as listed as required for such source of air contamination; and shall particularly put into effect the emission control action programs for an air pollution “Emergency”.
- (ii) All manufacturing establishments except those included in paragraph (A)(3)(a)(i) of this rule shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations which emit air contaminants to the extent possible without causing injury to persons or damage to equipment.
- (iii) All places of employment described below shall immediately cease operations:
 - (a) Mining and quarrying of non-metallic minerals.
 - (b) All contract construction work except that which must proceed to avoid physical harm.
 - (c) Wholesale trade establishments, including places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies.
 - (d) All offices of local, county, and state government including authorities, joint meetings, and other public bodies; except to the extent that such offices must continue to operate in order to enforce the requirements of this order pursuant to statute.
 - (e) All retail trade establishments except pharmacies and stores primarily engaged in the sale of food.
 - (f) Banks; credit agencies other than banks; securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers; real estate offices.
 - (g) Wholesale and retail laundries; laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.
 - (h) Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services; equipment rental services; commercial testing laboratories.
 - (i) Automobile repair, automobile services, garages.
 - (j) Establishments rendering amusement and recreation services including motion picture theatres.
 - (k) Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

(iv) There shall be no open burning by any person of tree waste, vegetation, refuse, or debris in any form.

(v) The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.

(vi) The use of motor vehicles; including, but not limited to automobiles, motorcycles, light-duty trucks and vans, and recreational vehicles; shall be prohibited except in emergencies with the approval of local or state police.

(B) When the director determines that an air pollution episode condition exists at one or more monitoring sites solely because of emissions from a limited number of sources, the director may order such source or sources to put into effect the emission control action programs which are applicable for each episode stage.

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