

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 (PM2.5)~~.
- (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 midnight to midnight 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 day, averaged over three years.
- (3) The level of the primary and secondary twenty-four-hour standards for PM2.5 is thirty-five micrograms per cubic meter, twenty-four-hour midnight to midnight 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, averaged over three years.
- (4) The level of the primary ~~and secondary~~ annual ~~standards~~standard for PM2.5 is ~~15.0~~ 12.0 micrograms per cubic meter, and the level of the secondary annual standard is 15.0 micrograms per cubic meter, both annual average ~~concentration~~concentrations. 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 ~~15.0~~12.0 micrograms per cubic meter for the primary annual standard and less than or equal to 15.0 micrograms per cubic meter for the secondary annual standard.

(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 not to be exceeded in a calendar year shall be 0.030 parts per million by volume (~~ppm~~). The annual arithmetic mean shall be rounded to three decimal places (fractional parts equal to or greater than 0.0005 ~~ppm~~ parts per million by volume shall be rounded up).
 - (b) The maximum twenty-four-hour concentration not to be exceeded more than once per calendar year shall be 0.14 parts per million by volume (~~ppm~~). The twenty-four-hour averages shall be determined from successive nonoverlapping twenty-four hour blocks starting at midnight each calendar day and shall be rounded to two decimal places (fractional parts equal to or greater than 0.005 ~~ppm~~ parts per million by volume shall be rounded up).
 - (c) The level of the primary one-hour annual ambient air quality standard for oxides of sulfur is seventy-five parts per billion (~~ppb~~), measured in the ambient air as sulfur dioxide. The standard is attained when the three-year average of the annual (ninety-ninth percentile) of the daily maximum one-hour average concentrations is less than or equal to seventy-five parts per billion (~~ppb~~), as determined in accordance with 40 CFR Part 50, Appendix T.
- (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 calendar year of 0.5 parts per million by volume (~~ppm~~). The three-hour averages shall be determined from successive nonoverlapping three-hour blocks starting at midnight each calendar day and shall be rounded to one decimal place (fractional parts equal to or greater than 0.05 ~~ppm~~ parts per million by volume shall be rounded up).
- (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 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~~z~~.

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

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

(b) 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 (~~ppm~~).

(2) For purposes of ascertaining, defining and measuring ambient air quality, concentrations of carbon monoxide shall be determined either through twenty-four-hour intermittent sampling utilizing the "Reference Method" in accordance with 40 CFR Part 50, Appendix C 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.

(D) Ozone~~z~~.

(1) The primary and secondary ambient air quality standard for ozone applicable throughout the state of Ohio, shall be 0.075 parts per million by volume (~~ppm~~) daily maximum eight-hour average, measured by a reference method based on 40 CFR Part 50, Appendix D and designated in accordance with 40 CFR Part 53 or an equivalent method designated in accordance with 40 CFR Part 53.

(2) The eight-hour primary and secondary 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~~ parts per million by volume, as determined in accordance with 40 CFR Part 50, Appendix P to this part.

(E) Nitrogen dioxide~~z~~.

(1) The primary ambient air quality standards for oxides of nitrogen applicable throughout the state of Ohio, measured in the ambient air as nitrogen dioxide, shall be as follows:

- (a) The maximum annual arithmetic mean concentration not to be exceeded in a calendar year is fifty-three parts per billion by volume (~~ppb~~). The standard is attained when the annual average concentration in a calendar year is less than or equal to fifty-three parts per billion by volume (~~ppb~~), as determined in accordance with 40 CFR Part 50, Appendix S.
 - (b) The one-hour average concentration not to be exceeded is one hundred parts per billion by volume (~~ppb~~). The standard is attained when the three-year average of the annual ninety-eighth percentile of the daily maximum one-hour average concentration is less than or equal to one hundred parts per billion by volume (~~ppb~~), as determined in accordance with 40 CFR Part 50, Appendix S.
- (2) The secondary ambient air quality standard for oxides of nitrogen applicable throughout the state of Ohio shall be 0.053 parts per million by volume (~~ppm~~), annual arithmetic mean concentration, measured in the ambient air as nitrogen dioxide. The standard is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 parts per million by volume (~~ppm~~), rounded to three decimal places (fractional parts equal to or greater than 0.0005 ~~ppm~~ parts per million by volume must be rounded up), as determined in accordance with 40 CFR Part 50, Appendix S.
 - (3) For purposes of ascertaining, defining and measuring ambient air quality, concentrations of oxides of nitrogen shall be determined either through twenty-four hour intermittent sampling utilizing the "Reference Method" in accordance with 40 CFR Part 50, Appendix S 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.

(F) Lead:

- (1) The primary and secondary ambient air quality standards for lead (~~Pb~~) and its compounds are 0.15 micrograms per cubic meter, arithmetic mean concentration over a three-month period, measured in the ambient air as leadPb. The standards for ~~Pb~~lead are attained when the maximum arithmetic three-month mean concentration for a three-year period is less than or equal to 0.15 micrograms per cubic meter, as determined in accordance with 40 CFR Part 50, Appendix R.
- (2) For purposes of ascertaining, defining and measuring ambient air quality, concentrations of lead shall be determined either through twenty-four hour

intermittent sampling utilizing the "Reference Method" in accordance with 40 CFR Part 50, Appendix G 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.