

REGULATION V - AIR QUALITY STANDARDS AND AREA CLASSIFICATION

RULE 510 AIR QUALITY STANDARDS

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**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS**

REGULATION V - AIR QUALITY STANDARDS AND AREA CLASSIFICATION

**RULE 510
AIR QUALITY STANDARDS**

SECTION 100 - GENERAL

- 101 PURPOSE:** To establish maximum limiting levels for pollutants existing in the ambient air which are necessary to protect human health and public welfare.
- 102 AVAILABILITY OF INFORMATION:** Copies of materials referenced in Sections 310, 401.1, and 401.2 of this rule are available at 1001 North Central Avenue, Suite 400, Phoenix, AZ, 85004 or call (602) 506-6010.

SECTION 200 - DEFINITIONS: See Rule 100 (General Provisions And Definitions) of these rules for definitions of terms that are used but not specifically defined in this rule. For the purpose of this rule, the following definitions shall apply:

- 201 PRIMARY AMBIENT AIR QUALITY STANDARDS** - The ambient air quality standards which define levels of air quality necessary, with an adequate margin of safety, to protect the public health, as determined by the Arizona Department of Environmental Quality and United States Environmental Protection Agency, and specified in this rule.
- 202 SECONDARY AMBIENT AIR QUALITY STANDARDS** - The ambient air quality standards which define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant, as determined by the Arizona Department of Environmental Quality and United States Environmental Protection Agency, and specified in this rule.

SECTION 300 - STANDARDS: The following are established as the primary and secondary ambient air quality standards for Maricopa County:

301 PARTICULATE MATTER - 2.5 MICRONS OR LESS (PM_{2.5}):

- 301.1 Primary and Secondary Ambient Air Quality Standards for PM_{2.5} Annual Arithmetic Mean Concentration:** The annual arithmetic mean concentration shall be 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The standard shall be considered attained when the annual arithmetic

mean concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 15 $\mu\text{g}/\text{m}^3$.

301.2 Primary and Secondary Ambient Air Quality Standards for $\text{PM}_{2.5}$ 24-hour Average Concentration: The 24-hour average concentration shall be 65 $\mu\text{g}/\text{m}^3$. The standard shall be considered attained when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 65 $\mu\text{g}/\text{m}^3$.

302 PARTICULATE MATTER - 10 MICRONS OR LESS (PM_{10}):

302.1 Primary and Secondary Ambient Air Quality Standards for PM_{10} Annual Arithmetic Mean Concentration: The annual arithmetic mean concentration shall be 50 $\mu\text{g}/\text{m}^3$. The standard shall be considered attained when the expected annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, Appendix K, is less than or equal to 50 $\mu\text{g}/\text{m}^3$.

302.2 Primary and Secondary Ambient Air Quality Standards for PM_{10} 24-hour Average Concentration: The 24-hour average concentration shall be 150 $\mu\text{g}/\text{m}^3$. This concentration shall not be exceeded more than once per calendar year at any one location. The standard shall be considered attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR 50, Appendix K, is less than or equal to 1.

303 SULFUR OXIDES (SULFUR DIOXIDE):

303.1 Primary Ambient Air Quality Standards for Sulfur Oxides (Measured as Sulfur Dioxide):

a. **Annual Arithmetic Mean Concentration:** The annual arithmetic mean concentration shall be 0.030 parts per million (ppm) (80 $\mu\text{g}/\text{m}^3$). This concentration shall not be exceeded in a calendar year. The annual arithmetic mean shall be rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm shall be rounded up).

b. **24-hour Concentration:** The maximum 24-hour concentration shall be 0.14 ppm (365 $\mu\text{g}/\text{m}^3$). This concentration shall not be exceeded more than once per calendar year at any one location. The 24-hour averages shall be determined from successive nonoverlapping 24-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 shall be rounded up).

303.2 Secondary Ambient Air Quality Standard for Sulfur Oxides (Measured as Sulfur Dioxide) 3-Hour Concentration: The maximum 3-hour concentration shall be 0.5 ppm (1300 $\mu\text{g}/\text{m}^3$). This

concentration shall not be exceeded more than once per calendar year at any one location. The 3-hour averages shall be determined from successive nonoverlapping 3-hour blocks starting at midnight each calendar day and shall be rounded to 1 decimal place (fractional parts equal to or greater than 0.05 ppm shall be rounded up).

304 OZONE:

Primary and Secondary Ambient Air Quality Standards for Ozone Eight-hour Average Concentration: The daily maximum eight-hour average concentration shall be 0.08 ppm. The standard shall be considered attained at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum eight-hour average ozone concentration, as determined in accordance with 40 CFR 50, Appendix I, is less than or equal to 0.08 ppm.

305 CARBON MONOXIDE:

305.1 Primary Ambient Air Quality Standards for Carbon Monoxide:

- a. **One-hour Average Concentration:** The maximum one-hour average concentration shall be 35 ppm (40 mg/m³). This concentration shall not be exceeded more than once per year at any one location.
- b. **Eight-hour Average Concentration:** The maximum eight-hour average concentration shall be 9 ppm (10 mg/m³). This concentration shall not be exceeded more than once per year at any one location. An eight-hour average shall be considered valid if at least 75% of the hourly averages for the eight-hour period are available. In the event that only six or seven hourly averages are available, the eight-hour average shall be computed on the basis of the hours available using 6 or 7 as the divisor.

305.2 When summarizing data for comparison with the standards, averages shall be stated to one decimal place. Comparison of the data with the levels of the standards in ppm shall be made in terms of integers with fractional parts of 0.5 or greater rounding up.

306 NITROGEN DIOXIDE:

Primary and Secondary Ambient Air Quality Standards for Nitrogen Dioxide Annual Arithmetic Mean Concentration: The annual arithmetic mean concentration shall be 0.053 ppm (100 µg/m³). The standard shall be considered 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, with fractional parts equal to or greater than 0.0005 ppm rounded up. To demonstrate attainment, an annual mean shall be based upon hourly data

that is at least 75% complete, or upon data derived from manual methods that is at least 75% complete for the scheduled sampling days in each calendar quarter.

307 LEAD:

Primary and Secondary Ambient Air Quality Standards for Lead Quarterly Maximum Arithmetic Mean Concentration: The maximum arithmetic mean concentration for lead and its compounds, measured as elemental lead, shall be 1.5 µg/m³, as averaged over a calendar quarter.

308 POLLUTANT CONCENTRATION DETERMINATIONS: Pollutant concentrations shall be measured by the following methods:

308.1 Appendices to 40 CFR 50: Pollutant concentrations shall be measured by the following appendices to 40 CFR 50:

<u>Pollutant</u>	<u>40 CFR 50</u>
Particulate Matter (PM _{2.5})	Appendix L
Particulate Matter (PM ₁₀)	Appendix J
Sulfur Oxides (Sulfur Dioxide)	Appendix A
Ozone	Appendix D
Carbon Monoxide	Appendix C
Nitrogen Dioxide	Appendix F
Lead	Appendix G

308.2 Reference or Equivalent Methods: Pollutant concentrations shall also be measured by:

- a. A method of measurement that has been designated as a reference or equivalent method by the Administrator acting pursuant to 40 CFR 53; or
- b. A method of measurement that, though not designated as a reference or equivalent method, has been approved for use by the Administrator acting pursuant to 40 CFR 58, Appendix C. Such method shall be subject to any restrictions placed on its use by the Administrator.

308.3 Method Withdrawal: The cancellation or supersession of designation of a reference or equivalent method by the Administrator acting pursuant to 40 CFR 53.11 or 53.16, shall also amount to a withdrawal of the authorization for use of that method for purposes of this regulation.

309 ADDITIONAL REQUIREMENTS:

309.1 Quality assurance, monitor siting, and sample probe installation procedures shall be in accordance with the procedures described in the Appendices to 40 CFR 58.

309.2 Unless otherwise specified, interpretation of all ambient air quality standards contained in this rule shall be in accordance with 40 CFR 50.

309.3 The evaluation of air quality data in terms of procedure, methodology, and concept is to be consistent with methods described in 40 CFR 50.

310 INCORPORATIONS BY REFERENCE: The CFR references listed below are incorporated by reference in Appendix G of these rules:

40 CFR 50;

40 CFR 50, Appendices A through N;

40 CFR 53;

40 CFR 58.26 and 40 CFR 58.50; and

40 CFR 58, all appendices.

SECTION 400 - ADMINISTRATIVE REQUIREMENTS

401 REPORTING OF AMBIENT AIR QUALITY MONITORING DATA:

401.1 Annual Air Quality Monitoring Report: The Control Officer shall submit to the Administrator an annual summary report that at a minimum meets the requirements of 40 CFR 58.26 and 40 CFR 58, Appendix F. The annual report will be made available to the public at the address listed in Section 102 of this rule.

401.2 Daily Air Quality Index (AQI) Report: The Control Officer shall report to the general public an AQI that at a minimum meets the requirements of 40 CFR 58.50 and 40 CFR 58, Appendix G. The AQI will also be made available to the public at the address listed in Section 102 of this rule.

SECTION 500 - MONITORING AND RECORDS (NOT APPLICABLE)

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