

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

NEW JERSEY ADMINISTRATIVE CODE

TITLE 7

CHAPTER 27

SUBCHAPTER 13

AMBIENT AIR QUALITY STANDARDS

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7:27-13.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Air contaminant" means solid particles, liquid particles, vapors or gases which are discharged into the outdoor atmosphere.

"Ambient air quality standard" means a limit on the concentration of a contaminant in the general outdoor atmosphere, which cannot be exceeded without causing or tending to cause injury to human health, welfare, animal or plant life or property, or unreasonably interfering with the enjoyment of life and property, excluding all aspects of employer-employee relationship as to health and safety hazards.

"Arithmetic mean" means the sum of n numbers divided by n.

"Carbon monoxide (CO)" means a colorless, odorless, tasteless gas at standard conditions, having a molecular composition of one carbon atom and one oxygen atom and which, for purposes of this subchapter, shall be collected and analyzed using methods approved by the Department.

"Department" means the Department of Environmental Protection.

"Eight-hour average concentration" means an average concentration for eight consecutive hours for which data are available.

"Geometric mean" means the nth root of the product of n numbers.

"Lead" means the element lead, whether in its elemental stage or as part of a chemical compound, and which, for purposes of this subchapter, shall be collected and analyzed using methods approved by the Department.

"Nitrogen dioxide (NO₂)" means a gaseous compound at standard conditions, having a molecular composition of one nitrogen atom and two oxygen atoms and which, for purposes of this subchapter, shall be collected and analyzed using methods approved by the Department.

"Ozone (O₃)" means a gas at standard conditions, having a molecular composition of three oxygen atoms and which, for purposes of this subchapter, shall be collected and analyzed using methods approved by the Department.

"ppm" means parts per million by volume under standard conditions.

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"Primary air quality standard" means an ambient air quality standard intended to protect the public health.

"Secondary air quality standard" means an ambient air quality standard intended to protect the public welfare.

"Standard conditions" shall be 70 degrees Fahrenheit and one atmosphere pressure (14.7 psia or 760 mm Hg).

"Sulfur dioxide (SO₂)" means a colorless gas at standard conditions, having a molecular composition of one sulfur atom and two oxygen atoms and which, for purposes of this subchapter, shall be collected and analyzed using methods approved by the Department.

"Suspended particulate matter" means any solid or liquid matter dispersed in the outdoor atmosphere which, for purposes of this subchapter, shall mean the material collected and analyzed using methods approved by the Department.

"Three-hour average concentration" means an average concentration for any three consecutive hours for which data are available.

"24-hour average concentration" means an average concentration or any 24 consecutive hours for which data are available.

7:27-13.2 General ambient air quality standards

(a) Whereas air is vital to life and contamination of it to any degree is a condition to be endured reluctantly; and whereas our knowledge of the long-term harmful effects of low levels of contamination is incomplete and uncertain; therefore, it is the air quality objective of the Department to assure, at all times and throughout the territory of the State, ambient air of the highest purity achievable by the installation and diligent operation and maintenance of pollution source control devices and methods consistent with the lawful application of the most advanced state of the art.

(b) Furthermore, it is the objective of the Department, by prevention and correction, so to enhance the quality of the outdoor air that as a minimum, and throughout the State, air quality will be in accord with the numerical air quality standards for specific pollutants set forth in subsequent Sections of this Subchapter.

(c) An implementation plan of action to meet air quality standards will be adopted by the Department and, from time to time, amended as necessary. The plan will incorporate all pertinent air pollution control regulations which limit or prevent the emission into the atmosphere of air contaminants for which air quality standards have been adopted. The plan also will include interim air quality objectives whose achievement through rigorous enforcement can then be predicted.

7:27-13.3 Ambient air quality standards for suspended particulate matter

(a) Primary air quality standards are:

1. During any 12 consecutive months, the geometric mean value of all 24-hour averages of suspended particulate matter concentrations in ambient air shall not exceed 75 micrograms per cubic meter; and
2. During any 12 consecutive months, 24-hour average concentrations may exceed 260 micrograms per cubic meter no more than once.

(b) Secondary air quality standards are:

1. During any 12 consecutive months, the geometric mean value of all 24-hour averages of suspended particulate matter concentrations in ambient air shall not exceed 60 micrograms per cubic meter; and
2. During any 12 consecutive months, 24-hour average concentrations may exceed 150 micrograms per cubic meter no more than once.

7:27-13.4 Ambient air quality standards for sulfur dioxide

(a) The primary air quality standards are:

1. During any 12 consecutive months, the arithmetic mean concentration of sulfur dioxide in ambient air shall not exceed 80 micrograms per cubic meter (0.03 ppm); and
2. During any 12 consecutive months, 24-hour average concentrations may exceed 365 micrograms per cubic meter (0.14 ppm) no more than once.

(b) The secondary air quality standards are:

1. During any 12 consecutive months, the arithmetic mean concentration of sulfur dioxide in ambient air shall not exceed 60 micrograms per cubic meter (0.02 ppm);
2. During any 12 consecutive months, 24-hour average concentrations may exceed 260 micrograms per cubic meter (0.1 ppm) no more than once; and
3. During any 12 consecutive months, three-hour average concentrations may exceed 1,300 micrograms per cubic meter (0.5 ppm) no more than once.

7:27-13.5 Ambient air quality standards for carbon monoxide

(a) The primary and secondary air quality standards are:

1. During any 12 consecutive months, eight-hour average concentrations of carbon monoxide in ambient air may exceed ten milligrams per cubic meter (9 ppm) no more than once; and

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2. During any 12 consecutive months, one-hour average concentrations may exceed 40 milligrams per cubic meter (35 ppm) no more than once.

7:27-13.6 Ambient air quality standards for ozone

(a) The primary air quality standard is:

1. During any 12 consecutive months, daily maximum one-hour average concentrations of ozone in ambient air may exceed 0.12 ppm (235 micrograms per cubic meter) no more than once.

(b) The secondary air quality standard is:

1. During any 12 consecutive months, one-hour average concentrations of ozone in ambient air may exceed 0.08 ppm (160 micrograms per cubic meter) no more than once.

7:27-13.7 Ambient air quality standards for lead

(a) The primary and secondary air quality standards are:

1. During any three consecutive months, the arithmetic mean of 24-hour averages of lead concentrations in ambient air shall not exceed 1.5 micrograms per cubic meter.

7:27-13.8 Ambient air quality standards for nitrogen dioxide

(a) The primary and secondary air quality standards are:

1. During any 12 consecutive months, the arithmetic mean concentration of nitrogen dioxide in ambient air shall not exceed 100 micrograms per cubic meter (0.05 ppm).