

401 KAR 53:005. General provisions.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Department for Environmental Protection
Division for Air Quality

Relates to: KRS Chapter 224

Pursuant to: KRS 13.082, 224.033

Necessity and Function: KRS 224.033 requires the Natural Resources and Environmental Protection Cabinet to prescribe regulations for the prevention, abatement, and control of air pollution. This regulation is to provide for the establishment of general provisions, definitions and time schedules as they pertain to this chapter.

Section 1. Purpose and intention.

- (1) The purpose of the primary ambient air quality standards is to define levels of air quality which the department judges are necessary, with an adequate margin of safety, to protect the public health. Secondary ambient air quality standards define levels of air quality which the department judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- (2) In the establishment of these standards, it is the intention of the department to prohibit further significant and avoidable deterioration of air quality in areas where air quality presently exists which is numerically equal to or less than the standards expressed herein.
- (3) Except as provided in 401 KAR 51:010, no person shall violate, or interfere with the attainment or maintenance of, ambient air quality standards as specified in 401 KAR 53:010.

Section 2. Applicability.

- (1) The primary and secondary ambient air quality standards stated in 401 KAR 53:010 shall apply at any single point location.
- (2) The secondary standard for odor shall be applicable only when the department receives a complaint with respect to odors from a source.

Section 3. Definitions. As used in this chapter, all terms not defined herein shall have the meaning given them in 401 KAR 50:010.

- (1) "Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.
- (2) "Reference method" means a method of sampling and analyzing for an air pollutant as specified by Appendices A through K of 40 CFR 50, filed by reference in 401 KAR 50:015.
- (3) "Equivalent method" means any method of sampling and analyzing of an air pollutant which can be demonstrated to the department's and the U.S. Environmental Protection Agency's satisfaction to have a consistent relationship to the reference method.
- (4) "Ambient air quality standard" means a numerical expression of a specified concentration level for a particular air contaminant and the

time averaging interval over which that concentration level is measured and is a goal to be achieved in a stated time through the application of appropriate preventive and/or control measures.

- (5) "Annual mean" means an average determined on the basis of any consecutive twelve (12) month interval.
- (6) "Three (3) hour average" means an average determined on the basis of any consecutive three (3) hour interval.
- (7) "Eight (8) hour average" means an average determined on the basis of any consecutive eight (8) hour interval.
- (8) "Twelve (12) hour average" means an average determined on the basis of any consecutive twelve (12) hour interval.
- (9) "One (1) week average" means an average determined on the basis of any consecutive seven (7) day interval.
- (10) "Maximum" means an ambient air quality standard which shall not be exceeded more than once per year providing that the averages exceeding the standard do not contain any common hourly data points.
- (11) "Odor" means the property of an air contaminant that can be detected by the sense of smell.
- (12) "Standard condition" means a reference temperature of twenty-five (25) degrees Celsius and a reference pressure of 760 millimeters of mercury.
- (13) "Year" means any consecutive twelve (12) month period.

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		JUL 12, 1982	47 FR 30059
1st Revision	JUL 07, 1988	FEB 07, 1990	55 FR 4169

401 KAR 53:010. Ambient air quality standards.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Department for Environmental Protection
Division for Air Quality

Relates to: KRS 224.320, 224.330, 224.340

Pursuant to: KRS 224.033

Necessity and Function: KRS 224.10-100 requires the Cabinet for Natural Resources and Environmental Protection to prescribe regulations for the prevention, abatement, and control of air pollution. This regulation is to fix ambient air quality standards necessary for the protection of the public health, the general welfare, and the property and people in this Commonwealth.

Section 1. Ambient air quality standards. The primary and secondary ambient air quality standards for sulfur oxides, particulate matter, carbon monoxide, ozone, hydrocarbons, nitrogen dioxide, lead, hydrogen sulfide, gaseous fluorides, total fluorides, and odors are specified in Appendix A of this regulation. Measurements will be by methods specified in Section 2.

Section 2. Methods of Measurement. For those air contaminants for which there are state ambient air quality standards that are the same as the national ambient air quality standards, measurements shall be made according to reference methods, or their equivalent methods. For other air contaminants for which there are state ambient air quality standards, measurements shall be made according to methods as prescribed by the department. The frequency of measurements for all air contaminants shall be prescribed by the department.

Section 3. Within sixty (60) days of promulgation or revision of any ambient air quality standard by the U.S. Environmental Protection Agency, the department shall initiate proceedings to promulgate or review this regulation in conformance with the federal ambient air quality standards.

[SIP Compilation Table After Appendix]

**APPENDIX A TO 401 KAR 53:010
 AMBIENT AIR QUALITY STANDARDS**

The following air contaminant concentrations shall apply at any single point location:

CONTAMINANT	PRIMARY STANDARD	SECONDARY STANDARD
Sulfur Oxides (Sulfur Dioxide) - ug/m ³		
Annual Arithmetic Mean, not to exceed	80 (0.03ppm)	
Maximum Twenty-four-hour average	365 (0.14 ppm) *	
Maximum Three-hour average		
1300 (0.5ppm) *		
Particulate Matter, measured as PM ₁₀ - ug/m ³		
Annual Geometric Mean, not to exceed	50**	50**
Maximum Twenty-four-hour average	150+	150+
Carbon Monoxide - mg/m ³		
Maximum Eight-hour average prim.	10 (9 ppm) *	Same as
Maximum One-hour average prim.	40 (35 ppm) *	Same as
Ozone - ug/m ³		
Maximum [One-hour] average prim.	<u>235 (0.12ppm)</u> ++	Same as
Nitrogen Dioxide - ug/m ³		
Annual Arithmetic Mean, not to exceed prim.	100 (0.05 ppm)	Same as
Lead - ug/m ³		
Maximum Arithmetic Mean averaged over a calendar quarter prim.	1.5	Same as
Hydrogen Sulfide - ug/m ³		
Maximum One-hour average ppm) *		14 (0.01
Gaseous Fluorides - (expressed as HF) - ug/m ³		
Annual Arithmetic Mean, not to exceed	400 (0.05ppm)	
Maximum One-month average		0.5 (0.6ppb) *
Maximum One-week average		
0.8 (0.97ppb) *		
Maximum Twenty-four hour average	800 (1.0ppm) *	
2.86 (3.5ppb) *		
Maximum Twelve-hour average		
3.68 (4.5ppb) *		
Total Fluorides-ppm		
Dry weight basis (as fluoride ion)		
in and on forage for consumption by grazing ruminants. The following concentrations are not to be exceeded:		
Average concentration of monthly samples		

over growing season	
(not to exceed 6 consecutive months)	40ppm(w/w)
Two-Month average	60ppm(w/w)
One-Month average	80ppm(w/w)

Odors: At any time when 1 volume unit of ambient air is mixed with 7 volume units of odorless air, the mixture must have no detectable odor.

Footnotes:

- * This average is not to be exceeded more than once per year.
- ** This standard is attained when the expected annual arithmetic mean concentration, as determined in accordance with Appendix K to 40 CFR 50, is less than or equal to fifty (50) ug/m³.
- + The standard is attained when the expected number of days per calendar year with a twenty-four (24) hour average concentration above 150 ug/m³, as determined in accordance with Appendix K of 40 CFR 50, is equal to or less than one (1).
- ++ The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm (ug/m³) is equal to or less than one (1), as determined by Appendix H of 40 CFR 50.

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