

#### **401 KAR 53:010. Ambient air quality standards.**

RELATES TO: KRS 224.20-100, 224.20-110, 224.20-120, 40 C.F.R. Parts 50, 51, 52, 53, 58, 75, 81, 42 U.S.C. 7401-7671q

STATUTORY AUTHORITY: KRS 224.10-100(5), 42 U.S.C. 7401-7671q

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) requires the cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation establishes ambient air quality standards necessary for the protection of the public health, the general welfare, and the property and people in the Commonwealth of Kentucky.

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

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 in accordance with 40 C.F.R. Parts 50 and 53. For other air contaminants for which there are state ambient air quality standards, measurements shall be made according to this administrative regulation, reference methods, or equivalent methods. The frequency of measurements for all air contaminants shall be prescribed by the cabinet, in accordance with 40 C.F.R. Parts 50 and 53, 401 KAR 50:015, or this administrative regulation.

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

Section 4. Appendix A. Ambient Air Quality Standards.

#### **AMBIENT AIR QUALITY STANDARDS**

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

Pollutant	Primary Standard	Secondary Standard
Carbon Monoxide	9 ppm <sup>(1)</sup>	--
	(10	
	mg/m <sup>3</sup> )	
Eight (8) hour average	35	--
One (1) hour average	ppm <sup>(1)</sup>	
	(40	
Lead	mg/m <sup>3</sup> )	Same as primary
	0.15	
	µg/m <sup>3</sup>	
Rolling three (3) month mean		

Nitrogen Dioxide	53 ppb	
Annual arithmetic mean	(100 $\mu\text{g}/\text{m}^3$ ) <sup>(2)</sup>	Same as primary
One (1) hour average	--	
Ozone	100 ppb	
One (1) hour average	0.12 ppm <sup>(3)</sup>	
Eight (8) hour average	0.070 ppm	Same as primary <sup>(3)</sup>
2015 standard	0.075 ppm	Same as primary
2008 standard	0.08 ppm <sup>(4)</sup>	Same as primary <sup>(4)</sup>
1997 standard	150 $\mu\text{g}/\text{m}^3$	
Particulate Matter, measured as PM <sub>10</sub>	12.0 $\mu\text{g}/\text{m}^3$	Same as primary
Twenty-four (24) hour average	15.0 $\mu\text{g}/\text{m}^3$	
Particulate Matter, measured as PM <sub>2.5</sub>	15.0 $\mu\text{g}/\text{m}^3$	
Annual arithmetic mean	(5)	
2012 standard	15.0 $\mu\text{g}/\text{m}^3$	Same as primary
2006 standard	15.0 $\mu\text{g}/\text{m}^3$	Same as primary
1997 standard	(5)	
Twenty-four (24) hour average	35 $\mu\text{g}/\text{m}^3$	Same as primary
2012 standard	35 $\mu\text{g}/\text{m}^3$	Same as primary
2006 standard	65 $\mu\text{g}/\text{m}^3$	
1997 standard	0.030 ppm <sup>(1)(6)</sup>	
Sulfur Dioxide	--	
Annual arithmetic mean	75 ppb	
One (1) hour average	--	
Three (3) hour average	0.5 ppm <sup>(1)</sup>	
Twenty-four (24) hour average	0.14 ppm <sup>(1)(6)</sup>	

Gaseous Fluorides - (expressed as HF)	400 $\mu\text{g}/\text{m}^3$ (0.5 ppm)	--
Annual arithmetic mean	--	$0.82 \mu\text{g}/\text{m}^{(1)}$ (1.00 ppb)
One (1) month average	--	$1.64 \mu\text{g}/\text{m}^{3(1)}$ (2.00 ppb)
One (1) week average	800	$2.86 \mu\text{g}/\text{m}^{3(1)}$ (3.50 ppb)
Twenty-four (24) hour average	$\mu\text{g}/\text{m}^{3(1)}$ (1.0 ppm)	$3.68 \mu\text{g}/\text{m}^{3(1)}$ (4.50 ppb)
Twelve (12) hour average	--	
Hydrogen Sulfide	--	
One (1) hour average	--	$14 \mu\text{g}/\text{m}^{3(1)}$ (0.01 ppm)
Odors	--	A mixture of one (1) volume of ambient air and seven (7) volumes of odorless air shall have no detectable odor at any time.
Total Fluorides		
Dry weight basis (as fluoride ion) in and on forage for consumption by grazing ruminants:	--	40 ppm
Average concentration of monthly samples over growing season (not to exceed six (6) consecutive months)	--	60 ppm
Two (2) month average	--	80 ppm
One (1) month average		

Footnotes:

<sup>1</sup> Average is not to be exceeded more than once per calendar year.

<sup>2</sup> The official level of the annual NO<sub>2</sub> standard is 0.053 ppm, equal to fifty-three (53) ppb, which is shown for the purpose of clearer comparison to the one (1) hour standard.

<sup>3</sup> The U.S. Environmental Protection Agency revoked the one (1) hour ozone standard in all areas in 2005. However, some areas have continuing obligations under the standard.

<sup>4</sup> The U.S. Environmental Protection Agency revoked the 1997 eight (8) hour ozone standard in 2015. However, some areas have continuing obligations under the standard.

<sup>5</sup> The secondary ambient air quality standard was not adjusted from the previously established standard.

<sup>6</sup> The 1971 sulfur dioxide standards remain in effect until one (1) year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved, in accordance with 40 C.F.R. Part 52, Subpart S.

(5 Ky.R. 376; 997; eff. 6-6-1979; 10 Ky.R. 432; eff. 3-1-1984; 14 Ky.R. 1621; eff. 4-14-1988; TAm eff. 8-9-2007; 42 Ky.R. 2830; 43 Ky.R. 22; eff. 7-19-2016; Crt eff. 9-12-2018.)