

ENERGY AND ENVIRONMENT CABINET

Department for Environmental Protection

Division for Air Quality

(Amendment)

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) authorizes~~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

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

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

AMBIENT AIR QUALITY STANDARDS		
The following air contaminant concentrations shall apply to any single point location:		
Pollutant	Primary Standard	Secondary Standard
Carbon Monoxide		
Eight (8) hour average	9 ppm ⁽¹⁾ (10 mg/m ³)	----
One (1) hour average	35 ppm ⁽¹⁾ (40 mg/m ³)	
Lead		
Rolling three (3) month mean	0.15 µg/m ³	Same as primary
Nitrogen Dioxide		
Annual arithmetic mean	53 ppb (100 µg/m ³) ⁽²⁾	Same as primary
One (1) hour average	100 ppb	--
Ozone		
One (1) hour average	0.12 ppm ⁽³⁾	Same as primary ⁽³⁾
Eight (8) hour average		
2015 standard	0.070 ppm	Same as primary
2008 standard	0.075 ppm	Same as primary
1997 standard	0.08 ppm ⁽⁴⁾	Same as primary ⁽⁴⁾
Particulate Matter, measured as PM ₁₀		
Twenty-four (24) hour average	150 µg/m ³	Same as primary
Particulate Matter, measured as PM _{2.5}		
Annual arithmetic mean		
<u>2024 standard</u>	<u>9.0 µg/m³</u>	<u>(5)</u>

2012 standard	12.0 $\mu\text{g}/\text{m}^3$	(5)
2006 standard	15.0 $\mu\text{g}/\text{m}^3$	Same as primary
1997 standard	15.0 $\mu\text{g}/\text{m}^3$	Same as primary
Twenty-four (24) hour average		
2012 standard	35 $\mu\text{g}/\text{m}^3$	(5)
2006 standard	35 $\mu\text{g}/\text{m}^3$	Same as primary
1997 standard	65 $\mu\text{g}/\text{m}^3$	Same as primary
Sulfur Dioxide		
Annual arithmetic mean	0.030 ppm ⁽¹⁾⁽⁶⁾	<u>10 ppb</u> ⁷ --
One (1) hour average	75 ppb	--
Three (3) hour average	--	0.5 ppm ⁽¹⁾
Twenty-four (24) hour average	0.14 ppm ⁽¹⁾⁽⁶⁾	--
Gaseous Fluorides - (expressed as HF)		
Annual arithmetic mean	400 $\mu\text{g}/\text{m}^3$ (0.5 ppm)	--
One (1) month average	--	0.82 $\mu\text{g}/\text{m}^3$ ⁽¹⁾ (1.00 ppb)
One (1) week average	--	1.64 $\mu\text{g}/\text{m}^3$ ⁽¹⁾ (2.00 ppb)
Twenty-four (24) hour average	800 $\mu\text{g}/\text{m}^3$ ⁽¹⁾ (1.0 ppm)	2.86 $\mu\text{g}/\text{m}^3$ ⁽¹⁾ (3.50 ppb)
Twelve (12) hour average	--	3.68 $\mu\text{g}/\text{m}^3$ ⁽¹⁾ (4.50 ppb)
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: Average concentration of monthly samples over growing season (not to exceed six (6) consecutive months) Two (2) month average One (1) month average	-- -- --	40 ppm 60 ppm 80 ppm
Footnotes: ¹ Average is not to be exceeded more than once per calendar year. ² The official level of the annual NO₂ 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. ³ 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. ⁴ 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. ⁵ The secondary ambient air quality standard was not adjusted from the previously established standard. ⁶ 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.		

⁷ Annual mean, averaged over 3 years

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