

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
STANDARDS AND REGULATIONS
CHAPTER 2
AMBIENT STANDARDS

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Section 1. Introduction to ambient standards.

(a) This Chapter establishes standards of ambient air quality necessary to protect public health and welfare. Such standards are subject to revision. The term “ambient air” refers to that portion of the atmosphere, external to buildings, to which the general public has access.

Section 2. Ambient standards for particulate matter.

(a) ***PM₁₀***: The ambient air standards for PM₁₀ particulate matter are:

(i) 50 micrograms per cubic meter--annual arithmetic mean;

(ii) 150 micrograms per cubic meter--24-hour average concentration with not more than one expected exceedence per year.

(iii) Attainment of the annual and 24-hour standards is determined in accordance with Appendix K of 40 CFR part 50.

(iv) For the purpose of determining attainment of the standards, particulate matter shall be measured in the ambient air as PM₁₀ (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers), by a reference method based on 40 CFR part 50, Appendix J and designated in accordance with 40 CFR part 53 or an equivalent or alternate method designated in accordance with 40 CFR part 53.

(b) ***PM_{2.5}***: The ambient air standards for PM_{2.5} particulate matter are:

(i) 15 micrograms per cubic meter--annual arithmetic mean;

(ii) 65 micrograms per cubic meter--98th percentile 24-hour average concentration.

(iii) Attainment of the annual and 24-hour standards is determined in accordance with Appendix N of 40 CFR part 50.

(iv) For the purpose of determining attainment of the standards, particulate matter shall be measured in the ambient air as PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers), by a reference method based on 40 CFR part 50, Appendix L and designated in accordance with 40 CFR

part 53 or an equivalent or alternate method designated in accordance with 40 CFR part 53.

(c) *Ambient air*, for the area bounded by Townships 40 through 52 North, and Ranges 69 through 73 West, inclusive, of the Sixth Principal Meridian, Campbell and Converse Counties, in the Powder River Coal Basin, is defined as that portion of the atmosphere, external to buildings, to which the general public has access. For surface mining operations, the application of this definition will be limited to only those lands that are necessary to conduct mining operations as determined by the Administrator of the Wyoming Air Quality Division.

Section 3. Ambient standards for nitrogen oxides.

(a) The ambient air standard for nitrogen dioxide, measured by the reference method described in 40 CFR part 50, Appendix F, or by an equivalent method designated in accordance with 40 CFR part 53, is:

(i) 100 micrograms per cubic meter (0.05 ppm)--annual arithmetic mean.

Section 4. Ambient standards for sulfur oxides.

(a) The ambient air standards for sulfur oxides measured by the pararosaniline (West-Gaeke) method given in 40 CFR part 50, Appendix A, or an equivalent method designated in accordance with 40 CFR part 53, are:

(i) 60 micrograms per cubic meter (0.02 ppm)--annual arithmetic mean;

(ii) 260 micrograms per cubic meter (0.10 ppm)--maximum 24-hour concentration not to be exceeded more than once per year;

(iii) 1,300 micrograms per cubic meter (0.50 ppm)--maximum 3-hour concentration not to be exceeded more than once per year.

Section 5. Ambient standards for carbon monoxide.

(a) The ambient air standard for carbon monoxide, measured by nondispersive infrared spectrometry, as described in 40 CFR part 50, Appendix C, or by an equivalent method designated in accordance with 40 CFR part 53, is:

(i) 10 milligrams per cubic meter (9 ppm)--maximum 8-hour concentration not to be exceeded more than once per year;

(ii) 40 milligrams per cubic meter (35 ppm)--maximum 1-hour concentration not to be exceeded more than once per year.

Section 6. Ambient standards for ozone.

(a) The level of the 8-hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR part 50, Appendix D and designated in accordance with 40 CFR part 53 is 0.08 parts per million (ppm), daily maximum 8-hour average.

(b) The 8-hour primary and secondary standard ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm, as determined in accordance with 40 CFR part 50, Appendix I.

Section 7. Ambient standards for hydrogen sulfide.

(a) The ambient air standards for hydrogen sulfide, measured by the mercuric chloride method, methylene blue method, or by an equivalent method are:

(i) 70 micrograms H₂S per cubic meter, ½-hour average not to be exceeded more than 2 times per year;

(ii) 40 micrograms H₂S per cubic meter, ½-hour average not to be exceeded more than 2 times in any five consecutive days.

Section 8. Ambient standards for suspended sulfates.

(a) The ambient air standards for suspended sulfate measured as a sulfation rate by the lead peroxide method are:

(i) 0.25 milligrams SO₃ per 100 square centimeters per day, maximum annual average;

(ii) 0.50 milligrams SO₃ per 100 square centimeters per day, maximum 30-day value.

Section 9. Ambient standards for fluorides.

(a) The ambient air standards for fluorides, measured as hydrogen fluoride through methods approved by the Administrator are:

(i) ***Statewide Standard:***

| Averaging Time | Maximum Allowable Concentration for Averaging Time |
|----------------|--|
| 12 hours | 3.0 µg/m ³ |
| 24 hours | 1.8 µg/m ³ |
| 7 days | 0.5 µg/m ³ |

30 days 0.4 µg/m³

(ii) Regional Standard:

| Averaging Time | Maximum Allowable Concentration for Averaging Time |
|----------------|--|
| 12 hours | 10.0 µg/m ³ |
| 24 hours | 4.0 µg/m ³ |
| 7 days | 1.8 µg/m ³ |
| 30 days | 1.2 µg/m ³ |

The Regional Standard applies to the area encompassing the following lands in Sweetwater County, Wyoming:

- T19N R104W, E1/2 Section 31 & Sections 32, 33, 34, 35, 36;
- T19N R103W, Section 31;
- T18N R105W, S1/2 Section 1 & Sections 12, 13, 24, 25, 35, 36;
- T18N R104W, All Sections 1 through 36;
- T18N R103W, Sections 6, 7, 18, 19, 30, 31, 32, 33;
- T17N R105W, Sections 1, 2, 11, 12, 13, 14, 23, 24, 25, 26;
- T17N R104W, Sections 1 through 30;
- T17N R103W, Sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30

(b) The standards for fluoride in forage for animal consumption measured as fluorine, dry weight basis, are:

| Averaging Time | Maximum Allowable Concentration for Averaging Time |
|----------------|--|
| One year | 30 ppm |
| 60 days | 60 ppm |
| 30 days | 80 ppm |

The concentration of fluoride in forage shall be determined through sampling and analysis methods approved by the Administrator.

Section 10. Ambient standards for lead.

(a) The ambient air quality standard for lead and its compounds, measured as elemental lead by a reference method based upon 40 CFR 50.12 Appendix G or by an equivalent method designated in accordance with 40 CFR part 53 is 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter.

Section 11. Ambient standards for odors.

(a) The ambient air standard for odors from any source shall be limited to:

(i) An odor emission at the property line which is undetectable at seven dilutions with odor free air as determined by a scentometer as manufactured by the Barnebey-Cheney Company or any other instrument, device, or technique designated by the Division as producing equivalent results. The occurrence of odors shall be measured so that at least two measurements can be made within a period of one hour, these determinations being separated by at least 15 minutes.

(b) No person shall operate or use any device, machine, equipment, or other contrivance for the reduction of animal matter unless all gases, vapors and gas entrained effluents from such facility are incinerated at a temperature of not less than 1200 degrees Fahrenheit for a period not less than 0.3 second, or processed by condensation or such manner as determined by the Division to be equally or more effective for the purpose of controlling such emissions.

(i) A person incinerating or processing gases, vapors, or gas entrained effluents pursuant to this rule shall provide, properly install, and maintain in good working order and in operation, devices as specified by the Division for indicating temperature, pressure, or other operating conditions.

(ii) Effective odor control devices, systems, or measures shall be installed and operated such that no vent, exhaust pipe, blowoff pipe, or opening of any kind shall discharge into the outdoor air any odorous matter, vapors, gases, or dusts, or any combination thereof, which create odors in areas adjacent to the plant in excess of the limits described in Chapter 2, Section 11(a)(i) of this regulation.

(c) Odor producing materials shall be stored, transported, and handled in a manner that:

(i) Odors produced from such materials are confined and that accumulation of such materials resulting from spillage or other escape is prevented.

(d) Whenever dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building used for processing animal matter in such manner and amount as to cause a violation of Subsection (a)(i) of this regulation, the Division may require that the building or buildings in which processing, handling, and storage are done be tightly closed and ventilated in such a manner that all airborne effluent materials leaving the building be treated by an effective means for removal or destruction of odorous matter before release to the open air.