

Chapter NR 431

CONTROL OF VISIBLE EMISSIONS

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Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., [Register, December, 1996, No. 492](#).

NR 431.01 Applicability; purpose. (1) APPLICABILITY. This chapter applies to all air contaminant sources and to their owners and operators.

(2) PURPOSE. This chapter is adopted under ss. [285.11](#), [285.13](#) and [285.17](#), Stats., to categorize air contaminant sources and to establish visible emission limitations for these sources in order to protect air quality.

History: Cr. [Register, September, 1986, No. 369](#), eff. 10-1-86; am. (1), [Register, May, 1992, No. 437](#), eff. 6-1-92.

NR 431.02 Definitions. The definitions contained in ch. [NR 400](#) apply to the terms used in this chapter.

History: Cr. [Register, September, 1986, No. 369](#), eff. 10-1-86; am. [Register, May, 1992, No. 437](#), eff. 6-1-92.

NR 431.03 General limitations. No person may cause, allow or permit emissions into the ambient air from any direct or portable source in excess of one of the limits specified in this chapter. Where the presence of uncombined water is the only reason for failure to meet the requirements of this chapter, such failure is not a violation of this chapter.

History: Renum. [NR 154.11 \(6\) \(intro.\) and am., Register, September, 1986, No. 369](#), eff. 10-1-86; am. [Register, May, 1992, No. 437](#), eff. 6-1-92.

NR 431.04 Emission limitations on or before April 1, 1972. All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this section.

(1) No owner or operator of a direct or portable source may cause or allow emissions of shade or density greater than number 2 of the Ringelmann chart or 40% opacity. Exceptions listed in s. [NR 431.05](#) shall apply.

(2) No owner or operator of a direct or portable source located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeastern Wisconsin Intrastate AQCR may, after July 31, 1975, cause or allow emissions of shade or density greater than number 1 of the Ringelmann chart or 20% opacity. Exceptions listed in s. [NR 431.05](#) shall apply.

History: Renum. [NR 154.11 \(6\) \(b\) and am., cr. \(2\), Register, September, 1986, No. 369](#), eff. 10-1-86; correction in (2) made under s. 13.93 (2m) (b) 6., Stats., [Register, July, 1988, No. 391](#); am. (1) and (2), [Register, May, 1992, No. 437](#), eff. 6-1-92; correction in (1), (2) made under s. 35.17, Stats., [Register January 2025 No. 829](#).

NR 431.05 Emission limitations after April 1, 1972. No owner or operator of a direct or portable source on which construction or modification is commenced after April 1, 1972 may cause or allow emissions of shade or density greater than number 1 of the Ringelmann chart or 20% opacity with the following exceptions:

(1) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringelmann chart or 20% opacity but may not exceed number 4 of the Ringelmann chart or 80% opacity for 6 minutes in any one hour. Com-

bustion equipment may not be cleaned nor a fire started more than 3 times per day.

(2) Emissions may exceed number 1 of the Ringelmann chart or 20% opacity for stated periods of time, as permitted by the department, for such purpose as an operating test, use of emergency equipment, or other good cause, provided no hazard or unsafe condition arises.

(3) For direct or portable sources in operation on or before February 1, 1975, where emission test data taken concurrently with opacity readings or continuous emission monitor data show the source to be in compliance with the applicable emission limits but not the opacity limits, an alternative opacity limit may be established according to methods and procedures in s. [NR 431.07](#).

History: Renum. [NR 154.11 \(6\) \(a\) \(intro.\) and 1. and am., cr. \(2\), Register, September, 1986, No. 369](#), eff. 10-1-86; am. (1) (c), [Register, April, 1987, No. 376](#), eff. 5-1-87; correction in (2), made under s. 13.93 (2m) (b) 6., Stats., [Register, July, 1988, No. 391](#); am. (intro.) and (1), r. (2), [Register, May, 1992, No. 437](#), eff. 6-1-92; [CR 02-146](#); am. (1) [Register October 2003 No. 574](#), eff. 11-1-03; correction in (intro.), (1), (2) made under s. 35.17, Stats., [Register January 2025 No. 829](#).

NR 431.07 Establishing alternate opacity limits. The department may set an alternate opacity limit for a source according to the criteria and certification procedures in this section.

(1) SOURCE CRITERIA. A source is eligible for an alternate opacity limit if it meets all of the following criteria:

(a) The source of emissions is not a fugitive emission source.

(b) The source is subject to an emission limitation in the form of a mass rate, stack gas concentration, or a fuel requirement for all pollutants that contribute to the opacity of a source's emissions.

(c) All emission units subject to the alternate opacity request are in compliance with all applicable provisions of chs. [NR 400](#) to [499](#), ch. [285](#), Stats., and all permit conditions with the exception of visible emission limits.

(d) The owner or operator of the source installs and operates a continuous emission monitor (CEM) for opacity that meets the performance specifications in s. [NR 439.09](#).

(e) The source is operated and maintained in such a manner as to minimize opacity through measures which are not discontinued once an alternate opacity limit is established.

(2) PROCEDURES. The procedure for establishing an alternate opacity limit is as follows:

(a) The source owner or operator shall notify the department in writing of its request to establish an alternate opacity limit at least 45 days prior to the performance of any testing for the purpose of establishing an alternate opacity limit. This notice shall include both of the following:

1. A test plan complying with s. [NR 439.07](#).

2. A quality assurance plan for the operation of a continuous emission monitor.

(b) The department shall review the notice required in par. (a) and shall approve, approve with conditions or disapprove the test

and quality assurance plans within 30 days after receipt of the notice.

(c) Not more than 30 days prior to the emission test, the continuous emission monitor shall pass a performance specification test as required by s. NR 439.09 (1) and a quarterly calibration error audit as required under s. NR 439.09 (8).

(d) If a continuous emission monitor exemption is granted under sub. (3), the department shall provide a person who is certified in visible emission evaluation to read opacity throughout the entire emission test period.

(e) Opacity data shall be collected throughout the entire emission test period.

(f) The emission testing shall be conducted in accordance with the methods and procedures of ch. NR 439.

(3) EXEMPTION FROM CONTINUOUS EMISSION MONITOR REQUIREMENT. The department may exempt a source owner or operator from the continuous emission monitor requirements in subs. (1) (d) and (2) if the following conditions are met:

(a) The source owner or operator requests an exemption in filing the notice required under sub. (2) (a).

(b) The source owner or operator demonstrates that the con-

tinuous emission monitor for opacity will not give representative readings.

(c) The department reviews and approves the request for exemption.

(4) CALCULATION OF THE ALTERNATE OPACITY LIMIT. To calculate an alternate opacity limit:

(a) The average opacity during each repetition of the performance test shall be determined by summing the individual readings taken during that repetition, by a continuous emission monitor for opacity or the department's observer, and dividing the sum by the number of readings.

(b) The alternate opacity limit shall be established at 10% opacity above the arithmetic mean rounded to the nearest whole number of the average opacity values determined for each performance test repetition which demonstrates compliance with all other applicable emission limits.

(5) RESTRICTION ON ESTABLISHING LIMIT. No alternate opacity limit may be established under this section if any other applicable emission limit would be violated by the source when operating at an opacity established under sub. (4).

History: Cr. Register, April, 1987, No. 376, eff. 5-1-87; am. (1) (d), (2) (a) 1. and (c), Register, May, 1992, No. 437, eff. 6-1-92; am. (2) (c), Register, December, 1993, No. 456, eff. 1-1-94; am. (1) (a) (intro.), Register, December, 1996, No. 492, eff. 1-1-97.