

IOWA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

POLICY/PROCEDURE STATEMENT

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DEPT. OF
NATURAL RESOURCES

TOPIC: Opacity Limits

Policy Procedure Number: 3-b-08

Replaces Number: None

Date:

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Preparer: David Phelps

Reviewer:

Approval: Bureau Chief: Peter Hamlin

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Division Administrator: Allan Stokes

Date: 11/12/98

Applicable Code of Iowa or Iowa Administrative Code Rule: 23.3(2)d

"No person shall allow, cause or permit the emission of visible air contaminants into the atmosphere from any equipment, internal combustion engine, premise fire, open fire or stack, equal to or in excess of 40 percent opacity or that level specified in a construction permit, except as provided below and in 567-Chapter 24."

REASON OR BACKGROUND

The default opacity limit allowed by regulation is 40%. This limit was established with the original regulations in 1970. It is generally accepted that opacity greater than 40% was evidence of a mass emission standard exceedence. More recently, there have been requests from facilities for limits much lower than that allowed by the regulations, in some cases less than 0.01 gr/scf to which a 40% opacity limit does not correspond. Since opacity is used as an indicator of the particulate emission rate, listing an indicated potential problem opacity that is more in line with the mass emission rate is useful. In order to have the authority to set limits lower than 40%, subrule 23.3(2)d was changed. This change allows the department the ability to set opacity limits at a level that more closely corresponds to what would be observed by the source when operating in compliance with its mass emission rate.

Except in the case where a specific opacity limit is established by rule, it has been the general policy of the Department not to take action on opacity limits directly. Rather, if it is felt that a violation of the mass emission rate exists that is not attributable to some abnormal event, a stack test would be required to verify compliance. However, the Department reserves the right to use the results of formal opacity readings as evidence of an exceedence.

DETAILS

It shall be the policy of the Department to list the default opacity as a permit condition and in addition an indicator opacity may be listed.

For ease of proving continual compliance a source may request a 'no visible emissions' opacity limit which allows proof of compliance without having a certified opacity reading taken. In this case any visible emissions would be an exceedence.

The IDNR permit writer may list an opacity that will be a indicator of possible mass emission rate exceedence. If the permittee wishes, the recommended indicator opacity may be changed by demonstrating compliance with the mass emission rate during a stack test while emitting the new desired indicator opacity. If the tested mass emission rate is less than the permitted emission rate, then the desired indicator opacity may be set at a proportionally higher level than observed during the stack test.

If an opacity measurement, taken in accordance with an approved reference method for opacity, (generally USEPA Method 9 or 22) exceeds the indicator opacity then the facility will promptly investigate the source and make corrections. However, if after corrections are made the opacity continues to exceed the indicator opacity the Department may require additional proof to demonstrate compliance with the mass emissions limits.

Recommended indicator opacities shall be:

Grain Loading gr./scf	Recommended Indicator Opacity
<0.01 gr./scf	non specified in permit *
0.01 to 0.06 gr./scf	10% Opacity
0.061 to 0.08 gr./scf	20% Opacity
0.081 to 0.1 gr./scf	25% Opacity

* A line is added to the permit that states: "If visible emissions are observed other than start-up, shut-down, or malfunction, a stack test may be required to demonstrate compliance with the particulate standard."

If a source is a batch process the indicator opacity shall be based on the table above, but the opacity averaging period, for comparison to the indicator opacity, shall be the entire batch cycle. For purposes of comparison to the indicator opacity readings shall be taken during the entire cycle and averaged.

Sources are also given the opportunity to set source specific limits to be coordinated with the initial compliance test. These may then be incorporated into the permit.

In all cases an exceedence of the indicator opacity will require the permittee to file an "indicator opacity exceedence report" to the IDNR regional office. The reporting requirements shall be:

Oral report of excess indicator opacity. An incident of excess indicator opacity (other than an incident of excess indicator opacity during a period of startup, shutdown, or cleaning) shall be reported to the appropriate regional office of the department within eight hours of, or at the start of the first working day following the onset of the of the incident. The reporting exemption for an incident of excess indicator opacity during startup and shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in subrule 25.1(6).

An oral report of excess indicator opacity is not required for a source with operational continuous monitoring equipment (as specified in subrule 25.1(1) if the incident of excess indicator opacity continues for less than 30 minutes and does not exceed the applicable visible emission standard by more than 10 percent opacity.

The oral report may be made in person or by telephone and shall include as a minimum the following:

- a) The identity of the equipment or source operation form which the excess indicator opacity originated and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and expected duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps being taken to remedy the excess indicator opacity.
- f) The steps being taken to limit the excess indicator opacity in the interim period.

Written report of excess indicator opacity. A written report of an incident of excess indicator opacity shall be submitted as a follow-up to all required oral reports to the department within seven (7) days of the onset of the upset condition, and shall include as a minimum the following:

- a) The identity of the equipment or source operation point from which the excess emission originate and the associated stack or emission point.
- b) The estimated quantity of the excess indicator opacity.
- c) The time and duration of the excess indicator opacity.
- d) The cause of the excess indicator opacity.
- e) The steps that were taken to remedy and to prevent the recurrence of the incident of excess indicator opacity.
- f) The steps that were taken to limit the excess indicator opacity.
- g) If the owner claims that the excess indicator opacity was due to malfunction, documentation to support this claim.

Exceptions to this policy:

- 1) In the case where a facility has an opacity limit established in an existing permit, no change will be made to that permit limit unless the permit is being modified for other purposes.
- 2) If the facility has a continuous opacity monitor, this policy shall not apply.
- 3) This policy shall not apply to opacity limits established in Prevention of Significant Deterioration (PSD) permits or permits that were established for maintenance plans for nonattainment areas.
- 4) This policy shall not apply where an opacity limit is established as an indication of hazardous air pollutants.

- 5) This policy shall not apply where an opacity limit is established by a rule, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), etc.