

**Method 203C--Visual Determination of Opacity of Emissions From Stationary Sources for Instantaneous Limitation Regulations.**

Method 203C is virtually identical to EPA's Method 9, except for the data-reduction procedures, which have been modified for application to instantaneous limitation regulations. Additionally, Method 203C provides procedures for fugitive dust applications, which were unavailable when Method 9 was promulgated. The certification procedures in section 3 are identical to Method 9. These certification procedures are provided in Method 203A as well, and, therefore, have not been repeated in this method. As an additional aid for observers, a sample visible emission observation form has been appended to Method 203A.

1. **APPLICABILITY AND PRINCIPLE**

1.1 **Applicability.** This method is applicable for the determination of the opacity of emissions from sources of visible emissions for instantaneous limitations. An instantaneous limitation regulation is an opacity limit which is never to be exceeded.

1.2 **Principle.** The opacity of emissions from sources of visible emissions is determined visually by a qualified observer.

2. **Procedures**

The observer qualified in accordance with section 3 of this method shall use the following procedures for visually determining the opacity of emissions.

2.1 Procedures for Emissions From Stationary Sources. Same

as 2.1, Method 203A.

2.1.1 Position. Same as 2.1.1, Method 203A.

2.1.2 Field Records. Same as 2.1.2, Method 203A.

2.1.3 Observations. Make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present.

Do not look continuously at the plume, instead, observe the plume momentarily at the interval specified in the subject regulation. Unless otherwise specified, a 15-second observation interval is assumed.

2.1.3.1 Attached Steam Plumes. Same as 2.1.3.1, Method 203A.

2.1.3.2 Detached Steam Plumes. Same as 2.1.3.2, Method 203A.

2.2 Procedures for Fugitive Process Dust Emissions.

2.2.1 Position. Same as Section 2.2.1, Method 203A.

2.2.2 Field Records. Same as Section 2.2.2, Method 203A.

2.2.3 Observations.

2.2.3.1 Observations for 15-second Observation Interval Regulations. Same as Section 2.2.3, Method 203A.

2.2.3.2 Observations for 5-second Observation Interval Regulations. Same as Section 2.2.3, Method 203A, except, observe the plume momentarily at 5-second intervals.

2.3 Recording Observations. Record opacity observations to the nearest 5 percent at the prescribed interval on an observational record sheet. Each momentary observation recorded represents the average of emissions for the prescribed period. If

a 5-second observation period is not specified in the applicable regulation, a 15-second interval is assumed. The overall time for which recordings are made shall be of a length appropriate to the regulation for which opacity is being measured.

2.3.1 Recording Observations for 15-second Observation Interval Regulations. Record opacity observations to the nearest 5 percent at 15-second intervals on an observational record sheet. Each momentary observation recorded represents the average of emissions for a 15-second period.

2.3.2 Recording Observations for 5-second Observation Interval Regulations. Record opacity observations to the nearest 5 percent at 5-second intervals on an observational record sheet. Each momentary observation recorded represents the average of emissions for a 5-second period.

2.4 Data Reduction for Instantaneous Limitation Regulations. For an instantaneous limitation regulation, a 1-minute averaging time will be used. Divide the observations recorded on the record sheet into sets of consecutive observations. A set is composed of the consecutive observations made in 1 minute. Sets need not be consecutive in time, and in no case shall two sets overlap. Reduce opacity observations by dividing the sum of all observations recorded in a set by the number of observations recorded in each set.

2.4.1 Data Reduction for 15-second Observation Intervals. Reduce opacity observations by averaging four consecutive

observations recorded at 15-second intervals. Divide the observations recorded on the record sheet into sets of four consecutive observations. For each set of four observations, calculate the average by summing the opacity of the four observations and dividing this sum by four.

2.4.2 Data Reduction for 5-second Observation Intervals. Reduce opacity observations by averaging 12 consecutive observations recorded at 5-second intervals. Divide the observations recorded on the record sheet into sets of 12 consecutive observations. For each set of 12 observations, calculate the average by summing the opacity of the 12 observations and dividing this sum by 12.

3. Qualification and Testing

Same as section 3, Method 203A.

4. References

Same as section 4, Method 203A.