

sources) necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements. The SIP revision shall contain the list of the potential measures considered by the State, and information and analysis sufficient to support the State's judgment that it has adopted all RACM, including RACT.

(b) In determining whether a particular emission reduction measure or set of measures must be adopted as RACM under section 172(c)(1) of the Act, the State must consider the cumulative impact of implementing the available measures. Potential measures that are reasonably available considering technical and economic feasibility must be adopted as RACM if, considered collectively, they would advance the attainment date by one year or more.

**§ 51.1011 Requirements for mid-course review.**

(a) Any State that submits to EPA an approvable attainment plan for a PM<sub>2.5</sub> nonattainment area justifying an attainment date of nine or ten years from the date of designation also must submit to EPA a mid-course review six years from the date of designation.

(b) The mid-course review for an area must include:

(1) A review of emissions reductions and progress made in implementing control measures to reduce emissions of direct PM<sub>2.5</sub> and PM<sub>2.5</sub> attainment plan precursors contributing to PM<sub>2.5</sub> concentrations in the area;

(2) An analysis of changes in ambient air quality data for the area;

(3) Revised air quality modeling analysis to demonstrate attainment;

(4) Any new or revised control measures adopted by the State, as necessary to ensure attainment by the attainment date in the approved SIP of the nonattainment area.

**§ 51.1012 Requirement for contingency measures.**

Consistent with section 172(c)(9) of the Act, the State must submit in each attainment plan specific contingency measures to be undertaken if the area fails to make reasonable further progress, or fails to attain the PM<sub>2.5</sub> NAAQS by its attainment date. The

contingency measures must take effect without significant further action by the State or EPA.

APPENDIXES A–K TO PART 51  
[RESERVED]

APPENDIX L TO PART 51—EXAMPLE REGULATIONS FOR PREVENTION OF AIR POLLUTION EMERGENCY EPISODES

The example regulations presented herein reflect generally recognized ways of preventing air pollution from reaching levels that would cause imminent and substantial endangerment to the health of persons. States are required under subpart H to have emergency episodes plans but they are not required to adopt the regulations presented herein.

1.0 *Air pollution emergency.* This regulation is designed to prevent the excessive buildup of air pollutants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these pollutants on the health of persons.

1.1 *Episode criteria.* Conditions justifying the proclamation of an air pollution alert, air pollution warning, or air pollution emergency shall be deemed to exist whenever the Director determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. In making this determination, the Director will be guided by the following criteria:

(a) *Air Pollution Forecast:* An internal watch by the Department of Air Pollution Control shall be actuated by a National Weather Service advisory that Atmospheric Stagnation Advisory is in effect or the equivalent local forecast of stagnant atmospheric condition.

(b) *Alert:* The Alert level is that concentration of pollutants at which first stage control actions is to begin. An Alert will be declared when any one of the following levels is reached at any monitoring site:

SO<sub>2</sub>—800 µg/m<sup>3</sup> (0.3 p.p.m.), 24-hour average.  
PM<sub>10</sub>—350 µg/m<sup>3</sup>, 24-hour average.  
CO—17 mg/m<sup>3</sup> (15 p.p.m.), 8-hour average.  
Ozone (O<sub>2</sub>)=400 µg/m<sup>3</sup> (0.2 ppm)-hour average.  
NO<sub>2</sub>—1130 µg/m<sup>3</sup> (0.6 p.p.m.), 1-hour average,  
282 µg/m<sup>3</sup> (0.15 p.p.m.), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase, or in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken.

(c) *Warning:* The warning level indicates that air quality is continuing to degrade and

that additional control actions are necessary. A warning will be declared when any one of the following levels is reached at any monitoring site:

SO<sub>2</sub>—1,600 µg/m<sup>3</sup> (0.6 p.p.m.), 24-hour average.  
PM<sub>10</sub>—420 µg/m<sup>3</sup>, 24-hour average.

CO—34 mg/m<sup>3</sup> (30 p.p.m.), 8-hour average.

Ozone (O<sub>3</sub>)—800 µg/m<sup>3</sup> (0.4 p.p.m.), 1-hour average.

NO<sub>2</sub>—2,260 µg/m<sup>3</sup> (1.2 ppm)—1-hour average;  
565 µg/m<sup>3</sup> (0.3 ppm), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase, or in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken.

(d) *Emergency*: The emergency level indicates that air quality is continuing to degrade toward a level of significant harm to the health of persons and that the most stringent control actions are necessary. An emergency will be declared when any one of the following levels is reached at any monitoring site:

SO<sub>2</sub>—2,100 µg/m<sup>3</sup> (0.8 p.p.m.), 24-hour average.

PM<sub>10</sub>—500 µg/m<sup>3</sup>, 24-hour average.

CO—46 mg/m<sup>3</sup> (40 p.p.m.), 8-hour average.

Ozone (O<sub>3</sub>)—1,000 µg/m<sup>3</sup> (0.5 p.p.m.), 1-hour average.

NO<sub>2</sub>—3,000 µg/m<sup>3</sup> (1.6 ppm), 1-hour average; 750 µg/m<sup>3</sup> (0.4 ppm), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase, or in the case of ozone, the situation is likely to reoccur within the next 24-hours unless control actions are taken.

(e) *Termination*: Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower status will be assumed.

1.2 *Emission reduction plans*. (a) *Air Pollution Alert*—When the Director declares an Air Pollution Alert, any person responsible for the operation of a source of air pollutants as set forth in Table I shall take all Air Pollution Alert actions as required for such source of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Alert.

(b) *Air Pollution Warning*—When the Director declares an Air Pollution Warning, any person responsible for the operation of a source of air pollutants as set forth in Table II shall take all Air Pollution Warning actions as required for such source of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Warning.

(c) *Air Pollution Emergency*—When the Director declares an Air Pollution Emergency, any person responsible for the operation of a source of air pollutants as described in Table III shall take all Air Pollution Emergency actions as required for such source of air pollutants and shall put into effect the preplanned abatement strategy for an Air Pollution Emergency.

(d) When the Director determines that a specified criteria level has been reached at one or more monitoring sites solely because of emissions from a limited number of sources, he shall notify such source(s) that the preplanned abatement strategies of Tables I, II, and III or the standby plans are required, insofar as it applies to such source(s), and shall be put into effect until the criteria of the specified level are no longer met.

1.3 *Preplanned abatement strategies*, (a) Any person responsible for the operation of a source of air pollutants as set forth in Tables I–III shall prepare standby plans for reducing the emission of air pollutants during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency. Standby plans shall be designed to reduce or eliminate emissions of air pollutants in accordance with the objectives set forth in Tables I–III which are made a part of this section.

(b) Any person responsible for the operation of a source of air pollutants not set forth under section 1.3(a) shall, when requested by the Director in writing, prepare standby plans for reducing the emission of air pollutants during periods of an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency. Standby plans shall be designed to reduce or eliminate emissions of air pollutants in accordance with the objectives set forth in Tables I–III.

(c) Standby plans as required under section 1.3(a) and (b) shall be in writing and identify the sources of air pollutants, the approximate amount of reduction of pollutants and a brief description of the manner in which the reduction will be achieved during an Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency.

(d) During a condition of Air Pollution Alert, Air Pollution Warning, and Air Pollution Emergency, standby plans as required by this section shall be made available on the premises to any person authorized to enforce the provisions of applicable rules and regulations.

(e) Standby plans as required by this section shall be submitted to the Director upon request within thirty (30) days of the receipt of such request; such standby plans shall be subject to review and approval by the Director. If, in the opinion of the Director, a standby plan does not effectively carry out the objectives as set forth in Table I–III, the Director may disapprove it, state his reason for disapproval and order the preparation of

**Environmental Protection Agency**

**Pt. 51, App. L**

an amended standby plan within the time period specified in the order.

**TABLE I—ABATEMENT STRATEGIES EMISSION REDUCTION PLANS ALERT LEVEL**

*Part A. General*

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between 12 noon and 4 p.m.

3. Persons operating fuel-burning equipment which required boiler lancing or soot blowing shall perform such operations only between the hours of 12 noon and 4 p.m.

4. Persons operating motor vehicles should eliminate all unnecessary operations.

*Part B. Source curtailment*

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Alert Level.

Source of air pollution	Control action
1. Coal or oil-fired electric power generating facilities .....	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Substantial reduction by diverting electric power generation to facilities outside of Alert Area.
2. Coal and oil-fired process steam generating facilities .....	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Substantial reduction of steam load demands consistent with continuing plant operations.
3. Manufacturing industries of the following classifications: Primary Metals Industry. Petroleum Refining Operations. Chemical Industries. Mineral Processing Industries. Paper and Allied Products. Grain Industry.	a. Substantial reduction of air pollutants from manufacturing operations by curtailing, postponing, or deferring production and all operations. b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gas vapors or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing.

**TABLE II—EMISSION REDUCTION PLANS**

**WARNING LEVEL**

*Part A. General*

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.
3. Persons operating fuel-burning equipment which requires boiler lancing or soot

blowing shall perform such operations only between the hours of 12 noon and 4 p.m.

4. Persons operating motor vehicles must reduce operations by the use of car pools and increased use of public transportation and elimination of unnecessary operation.

*Part B. Source curtailment*

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Warning Level.

Source of air pollution	Control action
1. Coal or oil-fired process steam generating facilities .....	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Maximum reduction by diverting electric power generation to facilities outside of Warning Area.
2. Oil and oil-fired process steam generating facilities .....	a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Making ready for use a plan of action to be taken if an emergency develops.

Source of air pollution	Control action
3. Manufacturing industries which require considerable lead time for shut-down including the following classifications: Petroleum Refining. Chemical Industries. Primary Metals Industries. Glass Industries. Paper and Allied Products.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operation. b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.
4. Manufacturing industries require relatively short lead times for shut-down including the following classifications: Primary Metals Industries. Chemical Industries. Mineral Processing Industries. Grain Industry.	a. Elimination of air pollutants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Elimination of air pollutants from trade waste disposal processes which emit solid particles, gases, vapors or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

TABLE III—EMISSION REDUCTION PLANS  
EMERGENCY LEVEL

*Part A. General*

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.
3. All places of employment described below shall immediately cease operations.
  - a. Mining and quarrying of nonmetallic minerals.
  - b. All construction work except that which must proceed to avoid emergent physical harm.
  - c. All manufacturing establishments except those required to have in force an air pollution emergency plan.
  - d. All wholesale trade establishments; i.e., places of business primarily engaged in selling merchandise to retailers, or industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies, except those engaged in the distribution of drugs, surgical supplies and food.
  - e. All offices of local, county and State government including authorities, joint meetings, and other public bodies excepting such agencies which are determined by the chief administrative officer of local, county, or State government, authorities, joint meetings and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.
  - f. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.
  - g. Banks, credit agencies other than banks, securities and commodities brokers, dealers,

exchanges and services; offices of insurance carriers, agents and brokers, real estate offices.

h. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.

i. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services; equipment rental services, commercial testing laboratories.

j. Automobile repair, automobile services, garages.

k. Establishments rendering amusement and recreational services including motion picture theaters.

l. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

4. All commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of air pollutants from their operation by ceasing, curtailing, or postponing operations which emit air pollutants to the extent possible without causing injury to persons or damage to equipment.

5. The use of motor vehicles is prohibited except in emergencies with the approval of local or State police.

*Part B. Source curtailment*

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this Emergency Level.

Source of air pollution	Control action
1. Coal or oil-fired electric power generating facilities .....	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing. c. Maximum reduction by diverting electric power generation to facilities outside of Emergency Area.
2. Coal and oil-fired process steam generating facilities .....	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage. b. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing and soot blowing. c. Taking the action called for in the emergency plan.
3. Manufacturing industries of the following classifications: Primary Metals Industries. Petroleum Refining. Chemical Industries. Mineral Processing Industries. Grain Industry. Paper and Allied Products.	a. Elimination of air pollutants from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Elimination of air pollutants from trade waste disposal processes which emit solid particles, gases, vapors or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of mid-day (12 noon to 4 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

(Secs. 110, 301(a), 313, 319, Clean Air Act (42 U.S.C. 7410, 7601(a), 7613, 7619))

[36 FR 22398, Nov. 25, 1971; 36 FR 24002, Dec. 17, 1971, as amended at 37 FR 26312, Dec. 9, 1972; 40 FR 36333, Aug. 20, 1975; 41 FR 35676, Aug. 24, 1976; 44 FR 27570, May 10, 1979; 51 FR 40675, Nov. 7, 1986; 52 FR 24714, July 1, 1987]

APPENDIX M TO PART 51—RECOMMENDED TEST METHODS FOR STATE IMPLEMENTATION PLANS

- Method 201—Determination of PM<sub>10</sub> Emissions (Exhaust Gas Recycle Procedure).
- Method 201A—Determination of PM<sub>10</sub> Emissions (Constant Sampling Rate Procedure).
- Method 202—Determination of Condensable Particulate Emissions From Stationary Sources
- Method 203A—Visual Determination of Opacity of Emissions from Stationary Sources for Time-Averaged Regulations.
- Method 203B—Visual Determination of Opacity of Emissions from Stationary Sources for Time-Exception Regulations.
- Method 203C—Visual Determination of Opacity of Emissions from Stationary Sources for Instantaneous Regulations.
- Method 204—Criteria for and Verification of a Permanent or Temporary Total Enclosure.
- Method 204A—Volatile Organic Compounds Content in Liquid Input Stream.
- Method 204B—Volatile Organic Compounds Emissions in Captured Stream.
- Method 204C—Volatile Organic Compounds Emissions in Captured Stream (Dilution Technique).
- Method 204D—Volatile Organic Compounds Emissions in Uncaptured Stream from Temporary Total Enclosure.
- Method 204E—Volatile Organic Compounds Emissions in Uncaptured Stream from Building Enclosure.

Method 204F—Volatile Organic Compounds Content in Liquid Input Stream (Distillation Approach).

Method 205—Verification of Gas Dilution Systems for Field Instrument Calibrations  
 Method 207—Pre-Survey Procedure for Corn Wet-Milling Facility Emission Sources

Presented herein are recommended test methods for measuring air pollutant emanating from an emission source. They are provided for States to use in their plans to meet the requirements of subpart K—Source Surveillance.

The State may also choose to adopt other methods to meet the requirements of subpart K of this part, subject to the normal plan review process.

The State may also meet the requirements of subpart K of this part by adopting, again subject to the normal plan review process, any of the relevant methods in appendix A to 40 CFR part 60.

METHOD 201—DETERMINATION OF PM<sub>10</sub> EMISSIONS

(EXHAUST GAS RECYCLE PROCEDURE)

1. Applicability and Principle

1.1 Applicability. This method applies to the in-stack measurement of particulate matter (PM) emissions equal to or less than an aerodynamic diameter of nominally 10 μm (PM<sub>10</sub>) from stationary sources. The EPA recognizes that condensable emissions not collected by an in-stack method are also PM<sub>10</sub>, and that emissions that contribute to