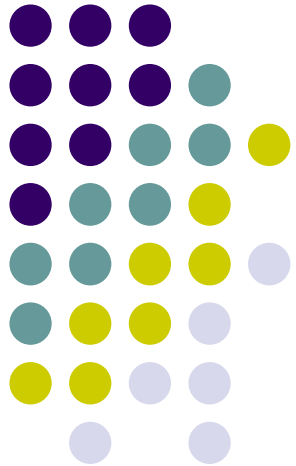
PM2.5 Implementation Rule



PM2.5 Schedule

Date	Action
Feb. 2004*	State designation recommendations due to EPA
June 2004	Implementation rule to OMB
Sept. 2004	EPA proposes implementation rule
June 2004	EPA letters to States responding to PM2.5 designation recommendations
Nov. 17, 2004*	EPA finalizes designations
Spring 2005	EPA finalizes implementation rule

*Dates codified in Consolidated Appropriations Bill of FY2004. SIP due dates for PM2.5 and regional haze are 3 years from effective date of PM2.5 designations.

Overview of PM2.5 Implementation Rule

- Overall approach
- Attainment dates
- Classifications
- PM2.5 precursors
- RACT
- RACM
- RFP
- Other issues

PM2.5 Implementation: Overall Approach

- Rule is based on section 172, subpart 1 requirements
- We strongly encourage early local reductions
  - Mortality & other serious health effects
  - 2002 is inventory base year (No penalty for early reductions)
  - To attain:
  - Reduce emissions under Federal programs (mobile source measures and regional reductions of SO2 and NOx)
  - Federally enforceable State/local measures

Attainment Dates

- State attainment demonstrations and SIP revisions are due within 3 years of designations
  - Attainment demonstrations need to provide for attaining the standard “as expeditiously as practicable”
  - Modeling and attainment demonstration guidance to be finalized in 2004. CAA presumption: attainment date is no later than five years from date of designation (e.g. Feb. 2010)
- Attainment determination would be based on most recent 3 calendar years (e.g. 2007-2009).

Classifications

- No classification categories based on design value
- Proposing “rural transport” classification
  - Criteria
    - Not in or adjacent to a metropolitan area
    - Impacted by overwhelming transport
    - Does not significantly contribute to its own problem
    - Based on 2000-2002 data, very few counties are not in or adjacent to an MSA
      - Seeking comment on whether a transport classification is needed

Current Approach* on PM2.5 Precursors by Program Area

Precursor	Transportation Conformity Proposal*	NSR for PM2.5 Draft*	PM2.5 Draft Implementation Rule
VOC	Options: 1) address all VOC; 2) presume that VOC do not need to be addressed, but can be included based on State/EPA finding.	Options: 1) address all VOC; 2) presume that VOC do not need to be addressed, but can be included based on State/EPA finding; 3) address only certain VOC	Options: 1) address all VOC; 2) presume that VOC do not need to be addressed, but can be included based on State/EPA finding; 3) address only certain VOC
NOx	Options: 1) include NOx; 2) presume that NOx does not need to be addressed, but can be included based on State/EPA finding.	Options: 1) include NOx; 2) presume that NOx does not need to be addressed, but can be included based on State/EPA finding.	Options: 1) include NOx; 2) presume that NOx does not need to be addressed, but can be included based on State/EPA finding.
SOx	Not required to be addressed due to small % of total emissions, but can be included based on State/EPA finding	Included	Included
Ammonia	Case by case: Not required to be addressed, but can be included based on State/EPA finding	Case by case: Not required to be addressed, but can be included based on State/EPA finding	Case by case: Not required to be addressed, but can be included based on State/EPA finding

** Applies to interim period. After SIP approval, these programs will address the pollutants addressed in the SIP.

Reasonably Available Control Technology (RACT)

- RACT is lowest emission limit that a source is capable of meeting with control technology that is available, considering technological and economic feasibility.
  - In the past, RACT has been an independent requirement that applies to major stationary sources.
  - Subpart 1: no specific categories identified
- No current plans for EPA to develop CTGs or ACTs.
  - Various existing sources of information
  - STAPPA developing new Menu of Options document for PM2.5 and precursors

Reasonably Available Control Measures (RACM)

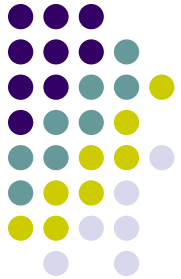
- A RACM demonstration must show that the State has adopted all reasonable measures needed to meet RFP and to attain the standard as expeditiously as practicable.
  - The demonstration should also show that there are no additional measures available that would advance the attainment date or contribute to RFP.
  - In determining RACM for an area, the state must consider the cumulative impact of implementing the available measures and whether such measures taken together would advance the attainment date.

RACT & RACM – Potential Measures

- Diesel retrofits (trucks, school buses, stationary engines)
- Diesel idling (trucks, trains, port equipment, etc.)
- Programs to reduce emissions from poorly maintained vehicles
- New or improved direct PM and precursor controls on stationary sources
- Year-round operation of seasonal stationary source NOx controls
- Increase use of alternative fuel, hybrid vehicles
- Buy-back programs for small engines (boats, vehicles, equipment)
- Year-round measures to reduce VMT (Commuter Choice, carpooling incentives, etc.)
- Open burning laws and better enforcement
- Programs to reduced emissions from residential wood combustion
- Smoke management plans
- Improved monitoring techniques and more frequent monitoring on sources with control devices
- Reducing emissions of volatile aromatic compounds (surface coatings, gasoline, solvents, etc.)
- Others ??

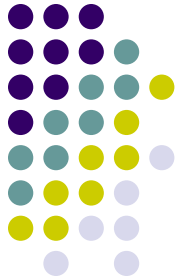
** We have provided grant funding to STAPPA to develop a PM2.5 “Menu of Options” document. Target date for completion is late 2004.

Regional vs. Local Controls



- Every area has a regional and a local component to its nonattainment problem
- Air quality is projected to improve due to reductions from programs on the books (e.g. mobile source rules, NOx SIP call, State programs, etc.)
  - States should take these reductions into account in developing plans to attain “as expeditiously as practicable”
- EPA are working on programs (e.g. Clean Air Interstate Rule) to address regionally transported SO2 and NOx
- Analysis of PM2.5 chemical composition monitoring data can help
- “Urban excess” analyses point to carbon, nitrate, and in some locations sulfate
  - Source apportionment and back trajectory analyses can identify potential contributing source categories

Modeling and Attainment Demonstrations



- Recommends one-atmosphere modeling
- Coordinate based on attainment years for ozone and PM2.5
  - For example, if an area has a 2008 attainment date for ozone and 2009 for PM2.5, then modeling for 2008 could address both programs
- Mid-course review requirement

Other Sections of the Preamble

- Technical overview – chemistry, sources, ambient data
- New source review - proposed changes for PM2.5
- Transportation conformity
- General conformity
- Contingency measures
- Innovative program mechanisms
- Policies for SIP credit
- PM2.5 source test methods
- Improved monitoring techniques to reduce emissions
- Emission inventories
- Tribal issues