Monitoring - Session # 3

- Target Existing PAMS/NAMS/SLAMS Sites
- Consider Adjustment for PM-10 to PM-2.5
- Collocate FP Monitors with Meteorological Monitors
- Should Be Increased Emphasis on Background/Transport Monitoring

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Monitoring - Session # 3

- Use Survey Techniques to Plan Monitoring Networks (e.g. Saturation Studies)

- Criteria for Planning and Site FP Samplers
  - Visual Observations
  - Terrain Considerations
  - Population Density
  - Pre-Plan Pollution Prevention to Alleviate Existing Problems, Prior to Designation
  - Existing PAMS Sites
  - Collocate with High Ozone Sites
  - Collocate with High(est) PM-10 Sites

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Consider Multiple Networks
- Concentration-Based Targets (1st)
- Risk-Exposure-Based Targets (2nd)
- Combined Goal Targets (3rd)

Define and Prioritize Monitoring Objectives
- High Population Density
- Characterize Problem
- Address Control Problem
- Consider Persistence in Prioritization
- De-emphasize Microscale Problems; e.g. use a screening procedure to focus network
Monitoring - Session # 3

- Local Conditions are Important for Initial Network Designs
- Some Federal Guidance and Flexibility Is Required to Address Most Serious Local Effects
- Should Monitor Network Deployment Guidance Be Included in Part 58 Document?
Monitoring - Session # 3

PM-10 versus PM-2.5

- If PM-10 < PM-2.5 Standard, Maintain the Existing PM-10 Monitoring and Allow Some Reasonable Adjustment Before Requiring Replacement with a PM-2.5 Monitor

- Consider Physical Differences (e.g. source mix) in PM-10 and PM-2.5
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- Major Uncertainty is the Physical Nature of Fine Particulates

- Use Limited Data and Modeling Results to Target Initial Locations and to Address Regional Effects
  - Target Areas Without Existing PM-10 Sites
  - Focus on High Ozone Sites; however, this might neglect important exposure considerations
  - Consider Collocating with CASTnet
  - Consider Effects of Ammonia Emissions
  - Consider and Learn About the Role of Primary FP
  - Consider High CO Sites for Urban Areas
Monitoring - Session #3

- EPA Allows Rather Than Requires A Preliminary Screening Study By States

- States Use Results As Feedback to Improve Screening and Adjust Monitoring Design to Achieve Objectives. Allow for a Feedback Cycle as Understanding Improves

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- Conduct an EPA Study with Screening Samples to Reduce Uncertainty About Needs Surrounding the FP Monitoring Network
  
  - EPA is Currently Locating Available FP Data on Screening Studies
  - Additional Data is Definitely Needed

- Keep Guidance Generic and Allow Individual States to Develop Their Initial Programs

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What Fundamental Guidance Should the Design Be Based Upon?

- First - Populations with expected high concentrations
- Likely source regions
- Mechanism for EPA screening when States fail to adequately address issues
- Setting minimum requirements could prohibit certain States from doing more (for States that must assume the minimum requirements wherever they exist in regulations)
Monitoring - Session # 3

- Develop Generic EPA Guidance

- States Develop Specifics, Including:
  - Prioritize Objectives
  - Monitoring Siting Criteria
  - Number of Monitors; Types of Monitors (e.g. background, source, exposure, etc.)
  - Timing; Schedules

- Should Generic Guidance Include High Population, High Concentration Site As a Mandatory Need?
  - Could consider city size
  - Guidance should discuss background concentrations; IMPROVE data and model results

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Specify Minimum Requirements for Federal Objectives and Leave Guidance Without Minimum Requirements for State Program

Consider Approaches to Allow EPA to Supplement Monitoring in States That Fail to Meet Guidelines or Minimum Requirements

Is It Important for EPA to Oversee Networks to Ensure Consistency and Adequacy?

If All Areas with Problems Could Be Predicted, Monitoring Should Be Done in All of Them Eventually

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- Siting Network Guidelines Could Change For FP Relative to PM-10. Problem of Microscale Bias; In local areas, microscale could have health exposure affects and Environmental Justice issues

- Haze is Solely Regional in Scope; Local Effects Are Not Important

- Could Start with IMPROVE Network Experience to Address Regional FP Issues

- Form of Guidance or Regulation Given That Regional FP Is a National and State Problem; e.g. when IMPROVE and CASTnet do not meet needs

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- Operation and Maintenance Costs of an EPA-Managed Regional FP or Haze Network
  - Minimum Network to Adequately Apportion Sources
  - Serve Dual Purpose to Track Regional FP and to Identify Sources

- Justifiable Minimum Requirements Likely in Face of Unfunded Mandates and Requirements. Needs have to Support Intended Objectives

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(Summary)

- Target High Population and High Concentration Areas
- Extend Ratio Research/Understanding
- Background Influence
- Neighborhood Microscale Influence
- Two Types of Networks
  - Problem Identification
  - Problem Control
- Supplement Existing PM-10 Based Screening
- Phase In Approaches for Different Objectives

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