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PM2.5 Speciation - Data Analysis Activities

May 22-25 Workshop

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OAQPS



Planned Data Analysis Activities

- Analyses to **support deployment**
- Analyses to **assess quality**
- Analyses to **make policy-related decisions**



Analyses to **Support Deployment**

- **Based on data from intercomparison studies**
- **Questions to be addressed**
 - **Do measurements vary by sampler type?**
 - mass (including comparison to FRM)
 - sulfate, nitrate
 - total carbon
 - ammonium
 - potassium, sodium
 - soil (weighted sum of Al, Ca, Fe, Si, Ti)
 - **Are the results consistent with previous studies?**
 - **Are criteria being used to invalidate data too strict or too lenient?**
- **Time line for report on results from studies**
 - **Mini-Trends: Interim in Mid July/00, Final in Oct/00**
 - **Sequential Samplers: November/December 2000**



Analyses to **Assess Quality**

- **Based on data from complete trends network.**
- **Questions to be addressed**
 - **Are the trends DQOs being met?**

Annual trends greater than 5% (or less than -5%) can be detected within 5 years, if measurement errors are controlled to within 3.6% for sulfate, 4.6% for nitrate, 8.3% for calcium, and 6.4% for TC.
 - **Are assumptions behind DQOs being met?**
- **Time line for report on quality**
 - **Ongoing - annual assessment reports beginning March 2002**



Analyses to **Make Policy-Related Decisions**

- **Speciation data to support numerous data analysis activities, for example**
 - **Basic characterization of airsheds**
 - **Development of control strategies**
 - **Evaluation of effectiveness of control strategies**
 - **Trends in components of PM_{2.5}**
 - **Evaluation of air quality simulation models and emission inventories**
 - **Source apportionment**
- **Characterization, Trends, and Source Apportionment to be discussed in greater detail during Wed/Thurs session on Data Analysis Techniques.**
- **Use of speciated data to evaluate air quality simulation models to be discussed briefly in Wed/Thurs session on Data Analysis Techniques.**