

APTI Course #470
“Quality Assurance for Air Pollution Measurement Systems”
Commonwealth of Virginia
Department of Environmental Quality
Air Quality Division
Glen Allen, Virginia
Feb. 9-11, 2010

COURSE AGENDA

| Date | Lecture #/Topic |
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| February 9, 2010 (Day 1, Tuesday) | |
| 12:00 Noon | #1: Registration, Course Registration and Information |
| Session 1: Overview of EPA’s Quality System Requirements | |
| 12:15 PM | #2: Introduction to EPA APTI Course #470 |
| 12:35 | #3: EPA’s National Air Monitoring Strategy |
| 12:50 | #4: EPA’s National Monitoring Networks |
| Session 2: Planning For Data Collection Using A Systematic Planning Process | |
| 1:15 | #5: Ambient Air Monitoring Systems: Basic Gaseous Real-time Systems as CO, NO _x , NO _y , SO ₂ , O ₃ (Classroom Demonstration) |
| 2:45 | #6: Monitoring Trace Levels of CO, SO ₂ and NO _y |
| 3:15 | BREAK |
| 3:30 | #7: Trace Level Calibration Challenges and Other Practical QA Challenges (Zero Air, Low Level Gas Cylinder Concentrations etc.) |
| 4:15 | #8: Ambient Air Monitoring Systems: Basic Particulate Matter (PM) Systems as Time-integrated and Real Time Beta Attenuation and Thermo TEOM (Classroom Demonstration) |
| 5:00 | Day 1 Review/Adjourn |
| Session 3: Collecting Environmental Data Using Documented Sampling Schemes | |
| February 10, 2010 (Day 2, Wednesday) | |
| 8:00 AM | #8 (Cont’d): Ambient Air Monitoring Systems: Basic PM |
| 8:45 | #9: Air Monitoring Station Components and Station Operator Concerns |
| 10:00 | BREAK |
| 10:15 | #10: EPA’s Monitoring Siting Criteria and Station Operator |
| 11:00 | #11: Meteorological Monitoring |
| 11:20 | #12: EPA’s NCore Multi-pollutant Program and NCore Problems |
| 12:00 | LUNCH |
| Session 4: Conduct Data Quality Assessment | |
| 1:00 PM | #13: Know Your Data |
| 1:40 | #14: Data Validation and Verification: The Process |
| 2:20 | #15: Introduction to Statistics |
| 2:35 | #16: Descriptive Statistics |

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| 3:10 | BREAK |
| 3:30 | #17: Precision and Bias |
| 4:15 | #18: Comparing Means and Paired Samples (t-test) |
| 4:45 | Tour of Commonwealth of Virginia DAQ Laboratory |
| 5:30 | Day 2 Review/Adjourn |
| Session 5: Assessing Quality Systems (Quality System Assessment) | |
| February 11, 2010 (Day 3, Thursday) | |
| 8:00 AM | #19: EPA's Various Performance Audit Programs (PEP, NPAP) |
| 8:45 | #20: Field Assessing QA for PM-2.5 & Speciation Monitors- Time-Integrated and Real Time Monitors With Focus on Thermo/R&P Model 2025 and Chinook FTS Calibrations- Classroom Demonstration |
| 10:00 | BREAK |
| 10:15 | #21: Field Assessing QA for PM-10 Monitors- Time-Integrated and Real-Time Monitors With Focus on Wedding PM-10- Classroom Demonstration |
| 11:45 | Review of Course #470/Student Critiques |
| 12:00 Noon | Course Adjourn/Student Certificates |