

16th Annual International Emission Inventory Conference

Emission Inventories: “Integration, Analysis, and Communications”



Courses May 14, 2007
Conference May 15 - 17, 2007
Raleigh, North Carolina – Sheraton Hotel



Sponsored by:
Emission Inventory and Analysis Group
Air Quality Assessment Division
Office of Air Quality Planning and Standards

Message from the General Conference Chair

The U.S. Environmental Protection Agency (EPA) invites you to the 16th Annual Emission Inventory Conference "Emission Inventories: Integration, Analysis, and Communications," to be held May 15 – 17, 2007 at the Sheraton Hotel in Raleigh, North Carolina. The conference is being organized by EPA's Emission Inventory and Analysis Group of the Office of Air Quality Planning and Standards (OAQPS).

This year the conference theme emphasizes new ideas for integrating emission inventory data across pollutants and source categories, analyzing emission inventory data to provide new insights and directions to air quality management, and communicating emissions inventory information in a clear and understandable manner to a broad range of stakeholders.

The conference starts on Monday with training courses on several aspects of emission inventory preparation and use. Updated versions of several training courses from earlier years will be presented (see the Training Schedule for course details).

This year, we will be following the format of the early years of the conference by starting the plenary session on Tuesday morning. We are very pleased to have three speakers who will address different aspects our conference theme regarding the integration, analysis and communication of emissions inventory data.

Steve Page, Director of the Office of Air Quality Planning and Standards, will start with a discussion of the Agency's efforts to reinvent emission inventories at EPA. Steve will discuss the importance of integrating emission inventories from the federal perspective and emphasize the need to leverage resources of our state and local agency partners. Nancie Imler, Chief Information Officer for the Pennsylvania's Department of Environmental Protection will discuss advances in data sharing using the Environmental Data Exchange Network from a State perspective. Sharing data will be increasingly important as regional approaches to analyzing environmental issues become the norm rather than the exception. William Ross (invited), Secretary of the North Carolina Department of Environment and Natural Resources will complete the morning session by discussing his experiences on successfully using emissions and other air quality data in developing air quality policies and programs for North Carolina.

On Tuesday evening, we will have a Poster Session and Exhibitor Reception from 6 – 8 with free hors d'oeuvres. Attending the reception is a great way to connect with other conference attendees and you will be able to discuss your air quality needs with several exhibitors. We have a very interesting lineup of poster presentations and the authors will be available to explain their work and answer your questions. As we did last year, we intend to mix fun with work by offering attendees the opportunity to vote for the posters of their choice and award prizes to the winners so please stop by and participate.

The heart of the conference unfolds during the technical sessions that follow on Tuesday afternoon, Wednesday and Thursday morning. We have retained many technical sessions from earlier years that are the mainstay of the conference but added a few new ones in response to changing program needs.

This is a great opportunity to keep abreast of developments in the world of emissions data so please plan to attend and share your experiences with other emission inventory professionals from federal/state/local and international regulatory agencies, tribal governments, industry and academia.

It has been several years since we had the conference in the Research Triangle Park area and we are very pleased to be the host this year. Raleigh is well along in revitalizing its downtown and offers a variety of attractions that should help make your stay memorable. I look forward to seeing you at the conference.

Douglas Solomon
General Chair
Emission Inventory and Analysis Group
Office of Air Quality Planning & Standards

Schedule at a Glance

| Time | Session |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Mon. May 14 | |
| 8:30 - 5:00 | - Courses (See Training Schedule) |
| Tue. May 15 | |
| 8:30-11:55 | - Plenary Session |
| Lunch (On Your Own) | |
| 1:30-3:10 | - Session 1 - EI Prep for Modeling - Session 2 - Web-based Tools and Information Systems - Session 3 - Greenhouse Gases |
| 3:10-3:40 | Break |
| 3:40-4:55 | - Session 1 - Continues - Session 2 - Continues - Session 3 - Continues |
| 6:00 – 8:00 | - Poster Session and Exhibitors' Reception |
| Wed. May 16 | |
| 8:30-10:10 | - Session 4 - Mobile Sources - Session 5 - Emission Factors - Session 6 - Air Toxics |
| 10:10-10:45 | Break |
| 10:45-11:55 | - Session 4 - Continues - Session 5 - Continues - Session 6 - Continues |
| Lunch (On Your Own) | |
| 1:30-3:10 | - Session 7 - Emissions Projections - Session 8 - Global/International Issues - Session 9 - GIS Assisted EI Development |
| 3:10-3:40 | Break |
| 3:40-4:55 | - Session 7 - Continues - Session 8 - Continues - Session 10 - Managed Burning & Wildfires |
| Thurs. May 17 | |
| 8:30 – 9:45 | - Session 7 - Continues - Session 10 - Continues - Session 11 - Fugitive Dust |
| 9:45-10:15 | Break |
| 10:15-12:20 | - Session 10 - Continues - Session 12 - Stationary Sources - Session 13 - EI Validation and QA |
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| | |

Plenary Session – Keynote Speaker Bios

Steve Page, Director, US EPA, Office of Air Quality Planning and Standards

Steve Page is the director of the Office of Air Quality Planning and Standards (OAQPS) at the U.S. Environmental Protection Agency, which is responsible for implementing the majority of the requirements of the Clean Air Act, including urban and rural air quality management, hazardous air pollution reduction programs, permitting programs and voluntary programs.

Prior to becoming director at Air Quality Planning & Standards in 2002, Mr. Page was the director of EPA's Office of Radiation and Indoor Air. He also has served as Chief of Staff and Director of Communications for EPA's Air and Radiation Office serving under two assistant administrators. From 1986 to 1992, he held a variety of senior management positions in the Office of Radiation and Indoor Air, including Radon Division Director. As one of the principal architects of EPA's Radon Program, Mr. Page won an Emmy Award. He also received the prestigious Crain Award from the Advertising Council for the year's best public service advertising of the year.

Mr. Page has a Masters Degree in Public Administration from the University of Southern California and a Bachelors Degree from Marietta College. He has authored numerous articles on public health and environmental protection. Steve served on the Robert Wood Johnson Foundation National Advisory Board for the Allies Against Asthma project

Nancie L. Imler, Chief Information Officer, Pennsylvania Department of Environmental Protection

Nancie L. Imler was named Chief Information Officer for the Pennsylvania's Department of Environmental Protection in June 2003. Prior to that appointment she was Director of the Department's Bureau of Program Integration and Effectiveness.

Ms. Imler also served the Federal Government from 1980 to 1997 as an information technology system designer for the U.S. Trident submarine program for the Navy Fleet Material Support Office.

Prior to her government service, Ms. Imler was a business education teacher at Elizabethtown High School in the 70s after graduating from Shippensburg University with a Bachelor of Science Degree in Business Education and a Master's Degree in Office Administration.

William G. Ross Jr., Secretary, North Carolina Department of Environment and Natural Resources (Invited)

William G. Ross Jr. is an attorney specializing in environmental law, and has broad civic and professional experience in a variety of land conservation and environmental protection efforts. Gov. Mike Easley appointed Mr. Ross as secretary of the N.C. Department of Environment and Natural Resources (DENR) on January 15, 2001.

From 1986 until his appointment as head of the state's lead environmental stewardship agency, Mr. Ross was a partner with the Greensboro and Raleigh law firm of Brooks, Pierce, McLendon, Humphrey & Leonard. From 1979 to 1984, Mr. Ross served as Director of the Office of Legal Affairs of the Department of Natural Resources and Community Development, which was later, reorganized to become DENR.

Mr. Ross has been a member and leader of many committees and organizations including The Nature Conservancy, the Guilford County Parks and Recreation Committee, the Piedmont Land Conservancy, the Raleigh Greenway Commission, the N.C. Environmental Education Fund and N.C. Environmental Defense. Mr. Ross received a bachelor's degree in history from Davidson College in 1969 and his law degree from the University of Virginia in 1972.

Training Schedule

Monday, May 14, 2007

8:00 – 5:00 pm

Courses will be offered on a first come, first serve basis. Pre-registration is required. Registered participants will be notified of class locations upon check-in.

Introduction to Emission Inventories

Instructor: Anne Pope, US EPA

Monday, May 14 – All Day

This course will provide a broad overview of the emission inventory process. Participants will learn about each of the critical steps in designing and implementing the development of an emission inventory. The course will cover the following topics:

- Planning an emission inventory
- Developing an emission inventory work plan
- Estimating emissions
- Documenting an emission inventory
- Emission inventory quality assurance
- Emission inventory reporting
- Emission inventory maintenance

Quantifying Greenhouse Gas Emissions

Instructor: Andrea Denny, US EPA

Monday, May 14 – All Day

This course will provide hands-on training on several greenhouse gas quantification tools for state/local governments. Participants will learn which tools are appropriate for different situations, including: setting baselines, projecting future emissions, calculating project-based emissions reductions, quantifying state-wide emissions, quantifying emissions from government operations, estimating emissions from direct and indirect sources, working with schools, and communicating results. The tools discussed range from simple calculators designed to provide rough estimates to complex systems requiring extensive data to yield accurate results. Tools covered by this training will include: The State Greenhouse Gas Inventory and Projection Tool, The Clean Air Climate Protection Software (CACPS), Emissions and Generation Resource Integrated Database (e-Grid), Climate Change Emissions Calculator Kit (Climate CHECK), and the GHG Equivalency Calculator.

Introduction to the Emissions Modeling Framework

Instructor – Marc Houyoux, US EPA

Monday, May 14 – Morning

This course introduces participants to the main parts of the Emissions Modeling Framework (EMF) that are needed for running SMOKE, including a system overview that describes all functions of the EMF. Hands-on training will be provided that covers:

- Data Management for loading, viewing, documenting and revising SMOKE input data
- Quality Assurance for checking SMOKE inputs before they are used in SMOKE
- Case Management for setting up and running SMOKE jobs

Emissions Modeling Framework: The Control Strategy Tool (CoST) and Other Advanced Features

Instructor – Marc Houyoux, US EPA

Monday, May 14 – Afternoon

This course expands on "Introduction to the Emissions Modeling Framework", which is a prerequisite for this course. In this course, attendees will learn about using the Control Strategy Tool module of the Emissions Modeling Framework (EMF) to develop control strategies and convert these for input to SMOKE. Users will also learn about more advanced features of the EMF, such as defining Dataset Types and Sectors.

National Mobile Inventory Model (NMIM)

Instructor: Harvey Michaels, US EPA

Monday, May 14 – Morning

EPA's NMIM is an emissions modeling system that generates county inventories using MOBILE6, NONROAD, and a database of county-level inputs. Participants will learn how to use NMIM on a Windows PC and how to work with the output. In addition to the basics, we plan to cover NMIM's diesel retrofit and fleet modeling capability. As time allows and participant interest indicates, we will also cover other topics, such as modifying the NMIM County Database using simple MySQL commands. The course will be organized around hands-on exercises, but persons without computers are also welcome. Computers will not be provided, so **PARTICIPANTS MUST BRING THEIR OWN LAPTOPS** running Windows 2000 or newer operating systems, with a CD drive, a minimum of 256 Mb of RAM, and a minimum of five free gigabytes of hard drive space. Participants must have NMIM pre-installed and running on their machines prior to the course. Please download and install the latest version of NMIM and the county database from <http://www.epa.gov/otaq/nmim.htm>.

Introduction to EPA's Motor Vehicle Emission Simulator (MOVES)

Instructor: Harvey Michaels, US EPA

Monday, May 14 – Afternoon

EPA's MOVES is an emissions modeling system that will eventually replace MOBILE6 and NONROAD as EPA's tool for estimating air pollution emissions from mobile sources. A draft model for estimating greenhouse gases and energy consumption from highway vehicles is available at this writing, and a demonstration version for criteria pollutants will be available prior to the class. Participants will learn how to use the highway vehicle demonstration version of MOVES on a Windows PC, including how to create a Run Specification, how to run the model, and how to work with model output. The course will be organized around hands-on exercises, but persons without computers are also welcome. Computers will not be provided, so **PARTICIPANTS MUST BRING THEIR OWN LAPTOPS** running Windows 2000 or newer operating systems, with a CD drive, a minimum of 256 Mb of RAM, and a minimum of five free gigabytes of hard drive space. Participants must have the demonstration version of MOVES pre-installed and running on their machines prior to the course. This version of the model will be available at <http://www.epa.gov/otaq/ngm.htm>.

Poster Session and Exhibitors' Reception

Tuesday, May 15, 2007

6:00 - 8:00 pm

- “Modeling Emissions Inventory Preparation for the Calgrid Photochemical Air Quality Model,”
D. Healy, New Hampshire Department of Environmental Services.
- “Overview of Emissions Modeling in Canada,” M. Sassi, V. Bouchet, and S. Menard,
Meteorological Service of Canada, Environment Canada.
- “Improving the Mobile Emissions Inventory for Air Quality Modeling in the Montreal Area,”
O. Gagnon, G. Morneau, and N. Pencheva, Environment Canada; Y. Noriega, Universite'
de Montreal, Canada.
- “Minerals Management Service Gulf of Mexico Emission Inventories,” H. Ensz, Office of
Leasing and Environment; D. Wilson and R. Billings, Eastern Research Group, Inc.
- “Using Tunable Diode Lasers to Measure Emissions from Animal Waste Lagoons,” D. B. Harris,
US EPA.
- “Ammonia Emissions from Open Lot Beef Cattle Feed Yards on the Southern High Plains,”
R.W. Todd, N. A. Cole and R. N. Clark, USDA-ARS.
- “New Uses for Emissions Inventories for the Next Decade,” N. Mayer, US EPA.
- “Impacts of Background Ozone Production on Houston and Dallas, TX Air Quality During the
NOAA 2006 TEXAQS Field Mission,” R. B. Pierce, J. Al-Saadi, C. Kittaka,
K. Bowman, G. Osterman, C. Hostetler, D. Winker, and A. Soja, NASA Langely
Research Center; T. Schaack, UW SSEC; W. McMillan, UMBC; Jim Szykman,
US EPA.
- “Seeing the Big Picture: Using Visualization Tools to Analyze Large Sets of Emission Data,”
W. Gerber, B. Jacoby, J. Veysey, and G. Kitzmiller, Eastern Research Group, Inc.
- “Recent Updates to the SMOKE Modeling System,” B. H. Baek, and A. Eyth, Institute for the
Environment, University of North Carolina, Chapel Hill; M. Houyoux and M. Strum,
US EPA.
- “Comparison of 2002 NEI and RPO EIs,” G. Stella, Alpine Geophysics; R. Ryan, and
D. Solomon, US EPA.
- “GIS Modeling of Agricultural Ammonia Emissions Air-Surface Exchange in North Carolina
Coastal Watersheds,” J. T. Walker and S. Kimbrough, US EPA; R. Austin and
W. Robarge, NC State University, Department of Soil Science.
- “Estimating Project Level GHGs Using MOVES2004,” J. Byun, Federal Highway
Administration.
- “Greenhouse Gas Emission: A Case Study of Development of Data Collection Tool and
Calculation of Emissions,” G. Shil, Trinity Consultants, KY; K. N. Blue, Trinity
Consultants, GA.

- “Greenhouse Gas Emissions from Freight Trucks,” J. Davies, US EPA.
- “Linking Traffic Analysis and Urban Emission Inventories; an Integrated Tool,” A. Brignone, Milan, Italy; A. Poli and P. Di Giovandomenico, Rome, Italy
- “Development of a Model Emissions Model for a Hybrid Electric Vehicle,” H. Zhai and C. Frey, Dept. of Civil Construction and Environmental Engineering, NC State University; N. M. Roupail, Institute for Transportation Research and Education, NC State University Centennial Campus.
- “Preparation of the 1990 National Emissions Inventory (NEI) for HAPs for Modeling,” R.G. Oommen, D. Wilson, and S. Finn, Eastern Research Group, Inc; A. Pope, U.S.EPA.
- “Demonstration of the New Consolidated Annual Criteria, Toxics and GHG Emissions Inventory System for Point and Nonpoint Sources,” N. Meskal and M. Meskal, Ecotek, MST Solutions, Inc; S. Summers, City of Albuquerque, Environmental Health Air Quality.
- “Data for Environmental Modeling,” J. E. Brandmeyer, RTI International.
- “Uncertainties in Prescribed Forest Fires Emission Inventories and Their Impact on Air Quality Modeling,” D. Tian and A. Russell, School of Civil and Environmental Engineering, Georgia Institute of Technology; E. Reinhardt, Missoula Fire Sciences Lab of the Rocky Mountain Research Station, USDA Forest Service; Y. Wang, School of Earth and Atmospheric Science, Georgia Institute of Technology.
- “Resolving NO_x Emissions Inventory Biases Using Discrete Kalman Filter Inversion, Direct Sensitivities and Satellite-based NO₂ columns,” S. L. Napelenok, R. W. Pinder and A. Gilliland, US EPA.
- “Demonstration of the New Consolidated Annual Criteria, Toxics and GHG Emissions Inventory System for Point and Nonpoint Sources,” N. Meskal and M. Meskal; S. Summers, Environmental Health Air Quality Division
- “The Use of Emission Inventories for Mobile Source Air Toxics Project Analysis,” K. N. Black, Federal Highway Administration.
- “Identifying Interesting Emissions Scenarios Using MARKAL, Monte Carlo and Data-Mining,” D. Loughlin, T. Johnson and C. Shay, US EPA
- “Australia’s National Pollutant Inventory,” Peter Thorning and Damian Lovejoy, Queensland Environmental Protection Agency

Tuesday, May 15, 2007

Session 1. Emissions Modeling

**Chairs: Marc Houyoux, US EPA
Mike Abraczinskas, NC
DENR**

- 1:30 "Emissions Modeling Framework: Status Update and EPA's Applications," M. Houyoux and M. Strum, US EPA; R. Mason, NOAA; A. Eyth, CEP
- 1:55 "A New Tool for Integrated Emissions and Controls Strategies Analysis," D. Misenheimer, D. Weatherhead, M. Houyoux, and L. Sorrels; A Eyth, Q. He, and R. Partheepan, CEP
- 2:20 "Integrated Assessment Modeling in Spain," R. Borge, J. Lumbreras, and E. Rodriguez, Department of Chemical & Environmental Engineering, Technical University of Madrid
- 2:45 "Development of an Interface for FAA's Emissions and Dispersion Modeling System (EDIMS) with the SMOKE Modeling System," B. H. Baek, S. Arunachalam, and A. Hanna, Institute for the Environment, UNC at Chapel Hill; T. Thrasher, CSSI, Inc; R. Iovinelli and M. Gupta; Federal Aviation Administration
- 3:10 Break
- 3:40 "A Revised Framework for Treating Primary Organic Aerosol Emissions in Inventories and Models," A. L. Robinson, A. P. Grieshop, M. K. Shrivastava, N. M. Donahue, T. E. Lane, and S. N. Pandis; Center for Atmospheric Particle Studies, Carnegie Mellon University
- 4:05 "Preparation of the First National Emissions Inventory for Modeling at a National Level in Mexico," R. Iniestra, T. Lopez, and D. Parra, Instituto Nacional de Ecología, México; Z. Adelman, UNC Chapel Hill
- 4:30 "The 2002 National Emissions Inventory Shakeout: The First Step in Development of EPA's 2002 Emissions and Air Quality Modeling Platform," R. Mason, NOAA; M. Strum, M. Houyoux, and N. Possiel, U.S EPA; A. Beidler, Computer Sciences Corporation, RTP

**Session 2. Web-based Tools and Information
Systems**

**Chairs: Mark Van Soestbergen,
ICBE
Jesse The', Lakes IT Gp**

- 1:30 "The Emissions Inventory Maintenance Application," J. E. Brandmeyer, A. Parks, S. Rao and R. Zerbonia, RTI International
- 1:55 "An Integrated Emissions Calculation and Data Management Tool for Nonroad Mobile Sources in Texas," R. Baker and D. Preusse, Eastern Research Group, Austin, TX
- 2:20 "A New Database Program for Creating Area Source Inventories," M. Noon, Ohio State University and T. Velalis, Ohio EPA
- 2:45 "Improvements to the State Inventory Tool Forestry Module," A. Denny, S. Asam, A. Choate, L. Pederson, and V. Thompson, ICF International
- 3:10 Break
- 3:40 "Web Service for Comparative Data Analysis of Emissions Inventories," S. Falke, Washington University in St Louis; G. Stella, Alpine Geophysics, LLC; T. Keating, US EPA

- 4:05 “Integrating at the Place: What Role Will Emissions Play in Seeing the Big Picture?” P. Garvey, Office of Environmental Information, HQ EPA
- 4:30 “The Air Emissions Inventory (AEI) Pilot: An update on a Universal Schema,” S. Rasmussen, U.S. Air Force; P. Garvey and S. Dombrowski, US EPA

Session 3. Greenhouse Gases

**Chairs: Leif Hockstad, US EPA
Marion Van Pelt, ICF
International**

- 1:30 “Greenhouse Gas Emission Inventories and Forecasts for Nine Western States,” S. M. Roe, R. P. Strait, H. Lindquist, E. H. Pechan; A. Bailie and Alison Jamison, Pembina Institute; T. D. Peterson, Center for Climate Strategies
- 1:55 “EPA’s Climate Change Emission Calculator Kit (Climate CHECK): A Climate Change Education and Greenhouse Gas Emission Inventory Kit for High Schools,” Christopher Steuer, ICF International
- 2:20 “Best Practices for Including Carbon Sinks in Greenhouse Gas Inventories,” A. Ravin and T. Raine, AICP, LEED, AP
- 2:45 “Methane Emissions and Emission Rates in 1990 and the Present from PG&E’s Natural Gas Transmission, Storage and Distribution System,” G. S. Martin, PG&E, San Francisco
- 3:10 Break
- 3:40 “Estimating National Landfill Methane Emissions: Application of the 2006 IPCC Waste Model in Panama,” M. Weitz, US EPA; J. B. Coburn, RTI International, Research Triangle Park, NC
- 4:05 “Assessment of Potential Reductions in Greenhouse Gas (GHG) Emissions in Freight Transportation,” C. Frey and P.-Y. Kuo, Department of Civil Construction and Environmental Engineering, North Carolina State University
- 4:30 “The Role of Black and Organic Carbon Emissions in Climate Change,” K. Weitz, M. Bahner and A. Zapata, RTI International, Research Triangle Park, NC

Wednesday May 16, 2007

Session 4. Mobile Sources

**Chairs: Laurel Driver, US EPA
Joe Pedelty, US EPA**

- 8:30 “Link-Level Mobile Source Emission Inventories in Regional Air Quality Modeling,” A. K. Pollack, S. Shepard, and M. Jimenez, ENVIRON International Corporation; M. Janssen, Lake Michigan Air Directors Consortium
- 8:55 “Emissions and Air Quality Analysis of the California Low Emission Vehicle II (CA LEV-II) Standards in North Carolina,” M. Abraczinskas, P. Jones, V. Chandler, and P. Bello, North Carolina Department of Environment and Natural Resources
- 9:20 “Implication of Measured In-Use Light Duty Gasoline Vehicle Emissions for Emission Inventory Development at High Spatial and Temporal Resolution,” H. C. Frey and K. Zhang, Department of Civil, Construction and Environmental Engineering, NC State University

- 9:45 “Analysis of Heavy Duty Diesel Truck Activity and Emissions Data,” T. Huai, S. D. Shah, and J. W. Miller, Department of Chemical and Environmental Engineering, Bourns College of Engineering, Center for Environmental Research and Technology, University of California; T. Younglove, The Statistical Consulting Collaboratory, University of California; D.J. Chernich and A. Ayala, California Air Resources Board
- 10:10 Break
- 10:40 “Methods for Measurement and Analysis of In-Use Emissions of Nonroad Construction Equipment,” H. C. Frey, W. J. Rasdorf, S.-H. Pang, K. Kim, and P. Lewis; Department of Civil, Construction and Environmental Engineering, NC State University
- 11:05 “Refining Commercial Lawn and Garden Equipment Population and Emissions Estimates,” S. Smeltzer, Alamo Area Council of Governments, San Antonio, Texas
- 11:30 “Techniques to Estimate Monthly Variation in Nonroad Emissions for California Nonroad Equipment,” M. Strum and D. Mintz; US EPA

Session 5. Emission Factors

**Chairs: Art Werner, MACTEC
John Bosch, US EPA**

- 8:30 “Development of Recent Source Test Data for WebFIRE,” W. Holden, L. Cress, S. Kersteter and A. Werner, MACTEC Federal Program; R. Myers, US EPA
- 8:55 TO BE DETERMINED
- 9:20 “Outdoor Wood Boilers - New Emissions Test Data and Future Trends,” P. Guldborg, C.C.M.
- 9:45 “Emission Factors for the Production of Sheet Molding Compound Used to Make Reinforced Plastic Composite Parts,” D. Lipiro, Environmental Compliance & Risk Management, Inc; C. Piper, Molded Fiberglass Research Company; J. Schweitzer, American Composites Manufacturing Association
- 10:10 Break
- 10:40 “VOC Emissions and Reduction Potential in Solvent Utilization,” Y. Sunwoo, Y.-Il Ma, Y. J. Kim, J. Y. Yoo, H. M. Kim, S. H. Kim, J. S. Nam, J. H. Kim, H. K. Sung, Department of Environmental Engineering, Konkuk University; D.G. Kim and J. H. Hong, Environmental Cap Research Department, National Institute of Environmental Research, Kyungseo-dong, Seo-gu, Incheon
- 11:05 “Development of Factors to Estimate 4-digit SIC Employment from 6-digit NAICS Employment Data for Selected Nonpoint Emission Inventory Categories with Example VOC Emission Calculations,” R. E. Wooten, North Carolina Division of Air Quality
- 11:30 “Methods for and Examples of Quantification of Uncertainty in Emission Factors and Inventories,” H. C. Frey, Department of Civil, Construction, and Environmental Engineering, NC State University

Session 6. Air Toxics

**Chairs: Chun Yi Wu, MN PCA
Rich Mason, US EPA**

- 8:30 “Toxicity-Weighting: A Prioritization Tool for Quality Assurance of Air Toxic Inventories,”
D. Wright, Section Chief Air Toxics and Emissions Inventory Program Maine Department of
Environmental Protection
- 8:55 “An Assessment of Benzo(a)pyrene Air Emissions in the Great Lakes Region,” J. Dettling, Great
Lakes Commission; C. Y. Wu, Minnesota Pollution Control Agency; O. Cabrera-Rivera,
Wisconsin Dept. of Natural Resources,
- 9:20 “Use of the 2002 NEI in the Risk and Technology Review (RTR),” A. Pope, P. Hirtz,
T. Palma, US EPA; S.Finn, Eastern Research Group, Inc
- 9:45 “2002 NEI HAP Trends: Success of CAA Air Toxic Programs in Reducing HAP Emissions and
Risk,” A. Pope and M. Strum, US EPA
- 10:10 Break
- 10:40 “A Closer Look at Air Pollution in Houston: Identifying Priority Health Risks,” H. L. Bethel,
US EPA; K. Sexton, The University of Texas, School of Public Health; S. Linder, Institute for
Health Policy, The University of Texas School of Public Health; S. Abramson, Pediatrics-
Allergy and Immunology, Baylor College of Medicine; M. Bondy, Department of
Epidemiology, The University of Texas M.D. Anderson Cancer Center; G. Delclos and
T. Stock, Division of Environmental and Occupational Health Sciences, The University of
Texas School of Public Health; M. Fraser, Department of Civil and Environmental
Engineering, Rice University; J. Ward, Department of Preventive Medicine and Community
Health
- 11:05 “Upwind/Downwind Analysis of Air Toxic Concentrations and Emissions for the San Juan, Puerto
Rico MSA,” R. Oommen, J. Hauser, D. Dayton, Eastern Research Group, Inc; M. Jones,
US EPA
- 11:55 “Quantifying Community Use of Pollutant Inventories,” P. Thorning, Queensland Environmental
Protection Agency; M. Howes, Griffith University, Australia

Session 7. Emission Projections

**Chairs: Linda Chappell, US EPA
Dan Loughlin, US EPA**

- 1:30 “Understanding Historical Emission Trends,” J. Warren and W. Hunt, North Carolina State
University; L. Chappell, US EPA
- 1:55 “Using Historical Information to Improve Emission Projections (or How to Avoid Being Doomed
to Repeat History),” A. D. Bollman and J. H. Wilson, Jr., E.H. Pechan, Inc; M. Janssen, Lake
Michigan Air Directors Consortium
- 2:20 “Emission Projections for the EPA Section 812 Second Prospective Clean Air Act Cost Benefits
Analysis,” J. H. Wilson, Jr, M. A. Mullen, A. D. Bollman, K. Thesing and M. Salhortra,
E. H. Pechan; J. Neumann and J. Price, Industrial Economics Inc; J. DeMocker, US EPA
- 2:45 “Activity Trends for Key Emission Sources in California's San Joaquin Valley, 1970-2030,”
S. B. Reid, D. C. Sullivan, B. M. Penfold, S. M. Raffuse and T. H. Funk, Sonoma Technology
Inc
- 3:10 Break

- 3:40 “Issues in the Use of Planning Models for Inventory Development,” D. Long, America Electric Power Service Corporation; M. Koerber and M. Janssen, Lake Michigan Air Directors Consortium
- 4:05 “Using Emission Inventories for an Integrated Energy and Environmental Decision Making,” V. Bhatt and J. Lee, Brookhaven National Laboratory; E.Linky, US EPA; T. O. Carroll, State University of New York
- 4:30 “Developing the WRAP Point and Area Source Emissions Projections for the 2018 Base Case,” P. Fields and M. Wolf, Eastern Research Group, Inc; A. Pollack, ENVIRON International Corporation; T. Moore, Western Regional Air Partnership

Session 8. Global/International Issues

**Chairs: Rebecca Tooly, US EPA
Marc Deslauriers,
Environment Canada**

- 1:30 “Reconciliation and Comparison of Regional and Global Emission Inventories,” G. Stella, Alpine Geophysics, LLC; T. Keating, US EPA
- 1:55 “India PM10 Emission Inventory Training and Capacity Building Programs: EPA Efforts for Developing a Sustainable Foundation,” P.Gaffney and M. Benjamin, California Air Resources Board; T. MacDonald, U.S. EPA; J.Core, Core Environmental Consulting; A. Ojha, Air Quality Management Cell, Pune, India
- 2:20 “Completion of the 1999 Mexico National Emissions Inventory - Lessons Learned,” P. G. Fields, and M. E. Wolfe, Eastern Research Group, Inc; V. G. Bavo and L. Rojas-Bracho, Instituto Nacional de Ecologia, Mexico; R. Halvey, Western Governor’s Association
- 2:45 “Emissions Inventorying as an Integrated Part of the State-of-the-Art Air Quality Management System, AirQUIS,” C. Guerreiro, H. Laupsa and R. Odegard, Norwegian Institute for Air Research
- 3:10 Break
- 3:40 “Harmonization of National Inventory and Projections of Multi-Pollutant Emission Scenarios,” T. Pignatelli, G. Vialetto and I.D. Elia, Italian Agency for New Technology, Energy and the Environment; R. DeLauretis, M. Contaldi, and D. Romano, Italian Agency for Environmental Protection and Technical Service
- 4:05 “New Insight into the Role of Wood Combustion as Key PM Source in Italy and in Lombardy Region,” S. Caserini, A. Fraccaroli, A. M. Monguzzi, M. Moretti, and E. Angelino, ARPA Lombardia, Milano; A. Leonardi, R. De Lauretis, APAT (National Environmental Protection Agency) Roma, Italy; V. Zanella, C.R.A. Customized Research & Analysis, Milano Italy; S. Marengo, Stazione Sperimentale, Donato Milanese, Italy
- 4:30 “Overtaking Top-Down Approach to Perform Local Traffic Emissions Inventories,” A. A. Poli, Environmental System Analysis, Rome, Italy

Session 9. GIS Assistant EI Development

**Chairs: Wayne Boulton, RWDI
Sally Dombrowski, US EPA**

- 1:30 “A Detailed Urban Road Traffic Emissions Inventory Model Using Aerial Photography and GPS Survey,” V. Gois and H. Maciel, InventAr, Portugal; P. Torres, S. Mesquita and F. Ferreira, Comissão de Coordenação e Desenvolvimento Regional de Lisboa Portugal; C. Almeida and L. Nogueira, Departamento de Ciências e Engenharia do Ambiente, Portugal
- 1:55 “Integrated Pollutant Release and Transfer Register (PRTR),” B. Leekstra and G. J. Stolwijk, Environmental Assessment Agency, the Netherlands
- 2:20 “GIS Assisted Emission Inventory Development for Variable Grid Emission Database for Mississippi Region,” J. Indracanti, V. S. Challa, R. L. Hughes, J. M. Baham, C. Patrick, M. Rabarison, J. Young, and Y. Anjaneyulu, Trent Lott Geospatial and Visualization Centre; S. Swanier, Office of Strategic Initiatives, Jackson State University
- 2:45 “Application of an Emission Inventory GIS-Based Tool across the Michigan/Ontario Border,” M. V. Altena, J. W. Boulton, S. Pellatt, and M. Lepage, RWDI AIR, Inc, Ontario Canada

Session 10. Managed Burning & Wildfires

**Chairs: Scott Goodrick, USFS
Amber Soja, NASA**

- 3:40 “EPA's Perspective on Fire Emission Inventories - Past, Present and Future,” T. G. Pace, US EPA
- 4:05 “Development and Demonstration of Smoke Plume, Fire Emissions, and Pre-and Post-Prescribed Fire Fuel Models on North Carolina Coastal Plain Forest Ecosystems,” R. Micjler, C. Geron, M. Rorig, and A. Bailey, Alion Science and Technology
- 4:30 “Carbon, Trace Gas, and Particulate Emissions from Wildfires in the Boreal Regions of North America,” N. H.F. French, Michigan Technological University; E. S. Kasischke, Department of Geography, College Park; M. R. Turetsky, Department of Plant Biology, Michigan State University; W. de Groot, Northern Forestry Centre, Edmonton, Alberta; R. Honrath, Department of Civil & Environmental Engineering; R. Ottmar, Pacific Northwest Research Station, USDA

Thursday May 17, 2007

Session 7. Emission Projections

**Chairs: Linda Chappell, US EPA
Dan Loughlin, US EPA**

- 8:30 “EMPAX-CGE as an Alternative Economic Driver for Non-EGU Sectors in EGAS 5.0,” A. Rios, US EPA
- 8:55 “Projecting Future-Year Pollutant Emissions: Emerging Methods and Tools from the EPA ORD Global Change Air Quality Assessment,” D. Loughlin, B. Bierwagen, A. Grambsch, B. Hemming, T. Johnson, and C. Shay, US EPA; B. Benjey and A. Gilliland, Atmospheric Sciences Modeling Division, NOAA
- 9:20 “Accounting for Land Use Changes in Projecting Future-Year Emissions Scenarios,” A. Eyth, L. Ran, and Z. Adelman, UNC at Chapel Hill; D. Theobald, Colorado State University

Session 10. Managed Burning & Wildfires

Chairs: Scott Goodrick, USF
Amber Soja, NASA

- 8:30 Incorporation of Federal Land Manager Estimates of Prescribed Burning into Emission Projections Developed for the VISTAS Regional Planning Organization,” W. R. Barnard, MACTEC, Inc; P. Brewer, VISTAS; G. Stella, Alpine Geophysics
- 8:55 “Developing a Near Real-Time Regional System for Modeling Air Quality Impacts of Prescribed Fire Emissions-Linking State Fire Activity Information with Regional Scale Air Quality Models,” S. Goodrick, G. Achtemeir, and Y.Liu, US Forest Service Southern Research Station; J. Brenner, Florida Division of Forestry
- 9:20 “Global Near Real Time Estimates of Biomass Burning Emissions using MODIS Fire Detections,” J. Al-Saadi and B. Pierce, NASA Langley Research Center; A. Soja, National Institute of Aerospace/NASA; C. Kittaka, SSAI; L. Emmonds, NCAR; S. Kondragunta and X. Zhang, NOAA NESDIS; Todd Schaak, Space Science and Engineering Center; J.Szykman, US EPA
- 9:45 Break
- 10:15 “Use of Environmental Satellite Imagery for Smoke Depiction and Transport Model Initialization,” M. Ruminski and S. Kondragunta, NOAA/NESDIS; R. Draxler, NOAA/ARL
- 10:40 “A Methodology and Assessment of Estimating Area Burned in Near Real Time,” A. Soja, National Institute of Aerospace; J. Al-Sasdi, B. Pierce, C. Kittaka, and J. Szykman, NASA Langley Research Center; L. Giglio, Science Systems and Applications, Inc; S. Raffuse, Sonoma Technology; D. Roy, D. J. Williams, T. Pace, and J. Kordzi, US EPA; D. Randall, Air Sciences Inc; T. Moore, Colorado State University
- 11:05 “Sensitivity of CMAQ Simulations to Prescribed Burn Emissions under Varied Plume Core Numbers,” Y. Liu, G. L. Achtemeir, and S. L. Goodrick, USDA Forest Service, Athens GA
- 11:30 “Synthesis of Multiple Observations Using a Regional Aerosol Assimilation/Forecast Model (RAQMS) and Assessment of Biomass Burning Emission Estimates,” C. Kittaka, SSAI, NASA Langley Research Center; B. Pierce, J. Al-Saadi, D. Winker, C. Hostetler, NASA Langley Research Center, Hampton VA; T. Schaack, Space Science and Engineering Center, University of Wisconsin; A. Soja, National Institute of Aerospace; Greg Tripoli, Department of Atmospheric and Oceanic Sciences, University of Wisconsin; A. da Silva, NASA Goddard Space Flight Center; Jim Szykman, US EPA; T.Baynard and R. Spackman, NOAA; Bryan Lambeth, Texas Commission on Environmental Quality
- 11:55 “On the Multiple-Core Updraft Smoke Plume Problem: Is the Genie Out of the Bottle?” G. L. Achtemeir, S. L. Goodrick, and Y. Liu, Center for Forest Disturbance Science, USDA

Session 11. Fugitive Dust

Chairs: Ilias Kavouras
Rodney Langston, Clark
County

- 8:30 - This session will consist of a panel discussion focusing on the results of a multi-component study
9:45 conducted in Clark County, Nevada. This study is titled “Proposed Alternative Method for Measuring Paved-Road Dust Emissions for Emission Inventories - "Mobile Technologies vs. the Traditional AP-42 Methodology" and the authors are R. Langston, R. S. Merle Jr, and D. Hart, Clark County Department of Air Quality and Environmental Management; V. Etyemezian, H. Kuhns, and J. Gillies, Desert Research Institute; D. Fitz and K. Bumiller, Center for Environmental Research and Technology, University of California; D. James, Department of Civil and Environmental Engineering, University of Nevada. Several of the authors will participate on the panel discussion.

Session 12. Stationary Source

**Chairs: Lynn Barnes, SC DHEC
Bob Betterton, W VA DEP**

- 10:15 “Development of a County Level Portable Fuel Container (PFC) Emission Inventory for VISTAS Based on the US EPA National PFC Inventory,” W. R. Barnard, MACTED, Inc; P. Brewer, VISTAS Technical Coordinator; G. Stella, Alpine Geophysics, LLC
- 10:40 “An Updated Emissions Inventory of Oil and Gas Area Sources in the Western Region,” A. Bar-Ilan, R. Friesen, A. Pollack, and A. Hoats, ENVIRON International Corporation
- 11:05 “Evaluation of Point Source Sensitivity Runs in NC,” M. Xie and J. Godfrey, NC DENR, Division of Air Quality
- 11:30 “Integration of GHG Point Source Emissions into the Routine Air Emission Inventory Process,” J. H. Southerland and H. Hawkins, NC Department of Environment and Natural Resources
- 11:55 TO BE DETERMINED

Session 13. EI Validation and QA

**Chairs: Tom Ballou, VA DEQ
Rhonda Thompson, US
EPA**

- 10:15 “Emissions Inventory of PM_{2.5} Trace Elements across the U.S.,” A. H. Reff, T. Pace, and D. Mobley, US EPA; P. V. Bhave and G. A. Pouliot, US EPA/NOAA
- 10:40 “Evaluation of a PM Inventory for Use in Eulerian Air Quality Models,” A. H. Reff and T. Pace, US EPA; P. V. Bhave and G. A. Pouliot, US EPA/NOAA
- 11:05 “ISO 14064, International Standard for GHG Emissions Inventories and Verification,” J. Wintergreen and T. Delaney, First Environment Inc
- 11:30 “Emission Inventory Validation and Improvement: A Central California Case Study,” S. B. Reid, L. R. Chinkin, B. M. Penfold, and E. K. Gilliland, Sonoma Technology Inc
- 11:55 “Analysis of Emissions Data from Continuous Emission Monitor Systems: How Continuous is the Data?” M. J. Oliva and K. D. Patel, US EPA

Registration

To register for the conference, courses, and meetings, please complete the on-line registration form located on the conference registration web page at <http://www.epa.gov/ttn/chief/conferences.html>. There is an optional food and beverage fee of \$100.00 which may be paid by credit card on the registration site. If you cannot access the Conference Registration webpage, please contact the ERG conference line at (781) 674-7374. Space is on a first come, first served basis, via registration. Registration should be received no later than April 30, 2007. For additional information regarding registration, please contact Kim Paylor at (919) 541-5474.

Logistics

The conference will be held at the Sheraton Raleigh Hotel. A block of rooms is being held for conference attendees for the nights of May 13 - 18, 2007. To make your reservations, call 800-325-3535 by April 11, 2007, the cut-off date to receive the room block rate of \$73.00/night plus tax for single occupancy, or \$113.00/night, plus tax for double occupancy. Please reference the "EPA Emission Inventory Conference" when making your reservation. You may also register online via at: <http://www.starwoodmeeting.com/StarGroupsWeb/booking/reservation?id=0701084172&key=DB8D3>. If you have further questions, please contact the ERG Conference registration line at 781-674-7374.