AVIATION EMISSIONS CHARACTERIZATION ROADMAP
14th meeting @
National Academy of Sciences
2101 Constitution Avenue, NW, Room 120
Washington, DC, USA
May 24-26, 2016

DRAFT Agenda (Revised 20 April 2016)

DAY 1  May 24, 2016

Noon – 12:15 pm  (1) Welcome, Introduction and Agenda
  Carl Ma (FAA) & Joe Navarrete (NAS)

12:15 – 12:30 pm  (2) Meeting purpose and expectations
  Ralph Iovinelli (FAA)

12:30 – 1:45 pm  (3) NASA Emissions Research
  Moderator: Daniel Jacob (FAA)
  Panelists: NASA - Fay Collier, Bruce Anderson, Kathy Tacina
  Topics:
  • NASA’s Environmentally Responsible Aviation (ERA) project
  • ACCESS 2
  • N+3 Rig Development Tests

1:45 – 2:00 pm  Break

2:00 – 3:00 pm  (4) Canada Emissions Research
  Moderator: Maryalice Locke (FAA)
  Panelists: Greg Smallwood (NRC), Pervez Canteenwalla (NRC), Ted McDonald (TC), Anthony Brown (NRC)
  Topics:
  • A Real-Time Method for Calibration of Black Carbon Mass Instruments for Aviation
  • Alternative Fuels to 100LL Aviation Gasoline
  • GARDN Research Projects
  • Biofuel-Blend Flight Emissions Research

3:00 – 4:00 pm  (5) Commercial Space Travel Emissions
  Moderator: Rangasayi Halthore  (FAA)
  Panelists: Office of Commercial Space (FAA), Martin Ross
  Panel discussion:
  • Emissions from Commercial Space Launches

End of Day 1
Day 2  
May 25, 2016

8:00 - 9:15 am  (6) Implementing the new CO₂ standards
Moderator: Laszlo Windhoffer (FAA)
Panelists: Wendy Bailey (TC), Steve Arrowsmith (EASA), Ricardo Antonio Binotto Dupont (ANAC)
Topics:
- Overview of CAEP/10 outcomes
- Harmonizing and codifying CO₂ standards
- Potential issues with implementing these standards

9:15 – 9:30 am  Break

9:30 – 10:45 am  (7) International engine nvPM standard
Moderator: Daniel Jacob (FAA)
Panelists: Mike Samulski (EPA), Randy McKinney (P&W), Katherine Preston (ACI-NA), Mike Kenney (KBE)
Panel discussion:
- CAEP/10 Standard and CAEP/11 Outlook
- OEMs, Regulators and Industry Perspectives of CAEP/10 and CAEP/11 standard

10:45 – 11:45 am  (8) Recently Completed ACRP Emissions Characterization Projects
Moderator: Jeetendra Upadhyay (FAA)
Panelists: Joseph Navarrete (NAS), Sarav Arunachalam (UNC), Mike Kenney (KBE)
Topics:
- Overview of ACRP Projects
- Dispersion Modeling Guidance for Airports Addressing Local Air Quality Health Concerns. ACRP Project: 02-58
- Development of a NOx Chemistry Module for EDMS/AEDT to Predict NO₂ Concentrations. ACRP Project: 02-43

11:45 am - 1:00 pm  Lunch (available for purchase in NAS cafeteria)

1:00 – 2:00 pm  (9) Update on The drive to unleaded gas for Piston Powered Aircraft
Moderator: Warren Gillette (FAA)
Panelists: Peter White (FAA); Dave Atwood (FAA)
Topics:
- Update on the Piston Aviation Fuels Initiative (PAFI) program, Phases I and II
- Testing at WJH Technical Center
2:00 – 2:15 pm  Break

2:15 – 3:15 pm  (10) Fuel Composition Effects on Emissions
Moderator: Meng-Hui Lai (FAA)
Panelists: Tonghun Lee (UIUC), Randy Vander Wal (PSU), Mel Roquemore (USAF)
Topics:
• Fundamental Studies of Alternative Fuels Emissions
• Update on Non-volatile PM Database Compilation, Analysis, and Predictive Assessment
• Update on Alternative Fuels Test Database Library

3:15 – 4:30 pm  (11) Alternative Fuels Research
Moderator: Carl Ma (FAA)
Panelists: Aniel Jardines (FAA), Cynthia Ginestra (Shell), Imad Khalek (SwRI)
Topics:
• FAA/CLEEN Alternative Jet Fuels R&D Update
• Correlating Reduced nvPM Emissions with Fuel Composition
• SwRI’s Jet Fuel Particle Index Correlation with Particle Emissions from Gas Turbines

End of Day 2

Day 3  May 26, 2015

8:00 – 9:00 am  (12) Aviation Emissions and Dispersion Modeling
Moderator: Mohammed Majeed (FAA)
Panelists: Laurent Cavadini (EUROCONTROL), Roger Wayson (Wyle), Rick Miake-Lye (ARI)
Topics:
• EUROCONTROL Tools
• Advancing the Dispersion Modeling Capabilities for Aircraft Operations
• Cruise PM methodology

9:00 – 10:15 am  (13) nvPM Measurements and System Losses
Moderator: Daniel Jacob (FAA)
Panelists: Don Hagen (MS&T), Rick Mialke-Lye (ARI), Frank Bachman (GE)
Topics:
- Particle losses in the system
- Uncertainties associated with nvPM measurements
- Industry experience with particle losses

10:15–10:30 am  **Break**

10:30 – 11:30 am  **(14) Aviation Air Quality and Health Impacts**
Moderator: Nicole Didyk (FAA)
Panelists: Steven Barrett (MIT), Sarav Arunachalam (UNC), Terry Keating (EPA)
Topics:
- GeosChem Adjoint Nested Model
- Advanced Air Quality Airport Modeling Capabilities
- Task Force on Atmospheric Transport

11:30 – noon  **(15) Discussion and Concluding Remarks**

Ralph Iovinelli (FAA)

**Meeting Adjourned**