

AGENDA

AVIATION TECHNICAL COMMITTEE MEETINGS of the Coordinating Research Council, Inc.

Hyatt at Olive 8
Seattle, Washington

May 2-5, 2011



Charter Members

API	Shell Aviation &
The Boeing Company	Shell Global Solutions
DLA Energy	United States Air Force
Federal Aviation Administration	United States Navy

Contributing Members

Air BP	GE Aviation
Air Total	IATA
Chevron Global Aviation	Innospec Fuel Specialties
ConocoPhillips	NASA
ExxonMobil Research & Engineering	Pratt & Whitney
Flint Hills Resources	RollsRoyce Plc
	Sasol Technology

Sponsor Members

Facet International	Gammon Technical Products
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Policy for Attendance at CRC Meetings and Participation in CRC Projects

By attending CRC technical committee meetings and participating in CRC activities each attendee/recipient of CRC information agrees to the following:

1. CRC Project Information and Data

Attendance at CRC technical committee meetings and participation in CRC projects is by invitation only at the discretion of the meeting chairperson(s) or project leader.

It is understood that the major purpose of the work performed under the auspices of CRC is to develop information that may be made available to industry and the public through final publications only after the responsible CRC technical committee has reviewed the information and given its final approval for public release.

Meeting attendees and project participants agree that any announcement or publication of data, information, or works in progress discussed in CRC meetings shall not be disclosed to anyone other than (i) CRC personnel, (ii) CRC members, or (iii) attendees at the meeting unless and until said information is approved by CRC.

2. Intellectual Property

CRC meeting attendees and project participants agree that any and all intellectual property (including but not limited to patents, trade secrets, know-how, trademarks and copyrights) developed in connection with or during the course of any CRC sponsored research, as between CRC members and CRC, is the property of CRC and not the property of any CRC member or participant. CRC retains the right to place any such intellectual property in the public domain or to retain all rights thereto as described in CRC's bylaws.

COORDINATING RESEARCH COUNCIL, INC.

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MEETING SCHEDULE 2011 CRC AVIATION MEETINGS May 2-5, 2011

Monday, May 2, 2011

	Meeting Room
1:00 PM - 3:00 PM Aviation Gasoline & Piston Fuels Group <i>Roger Gaughan, Chair, & Dave Atwood, Vice-Chair</i>	Ballroom ABC
3:00 PM - 3:30 PM BREAK	Ballroom Foyer ABC
3:30 PM - 6:00 PM Aviation Gasoline & Piston Fuels Group (continued) <i>Roger Gaughan, Chair, & Dave Atwood, Vice-Chair</i>	Ballroom ABC
6:00 PM - 7:00 PM Hosted Reception	Ballroom Foyer ABC

Tuesday, May 3, 2011

	Meeting Room
7:00 AM - 8:00 AM Breakfast Buffet	Ballroom Foyer ABC
8:00 AM - 8:30 AM CRC Introduction & Overview <i>Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair</i>	Ballroom ABC
8:30 AM - 9:45 AM Fuel Handling & Contamination Group <i>Haydee Carlton, Chair, and Jack Buffin, Vice-Chair</i>	Ballroom Foyer ABC
9:45 AM - 10:05 AM BREAK	Ballroom Foyer ABC
10:05 AM - 11:05 AM Operability Group <i>John Rhode, Chair, and Rob Midgley, Vice-Chair</i>	Ballroom ABC
11:05 AM - 12:35 PM LUNCH ON OWN	
12:35 PM - 1:50 PM Production & Delivery Group <i>Fred Cornforth, Chair, and Ron Osman, Vice-Chair</i>	Ballroom ABC
1:50 PM - 2:20 PM Low Temperature Group <i>Don Phelps, Chair, and Dennis Hoskin, Vice-Chair</i>	Ballroom Foyer ABC
2:20 PM - 2:40 PM BREAK	Ballroom Foyer ABC
2:40 PM - 4:40 PM Emerging Fuels Group - Session 1 <i>Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair</i>	Ballroom ABC
5:40 PM - 9:30 PM Dinner Cruise aboard Royal Argosy <i>Meet at 5:40 pm in lobby to walk down to pier as a group. Boarding 6:00-6:25; cruise departs at 6:30.</i>	

Monday 10:30 am - 12:30 IASH Board of Directors (Not CRC meeting; IASH members and invited guests only)

Wednesday, May 4, 2011

Meeting Room

7:00 AM - 8:00 AM	Breakfast Buffet	Ballroom Foyer ABC
8:00 AM - 10:30 AM	Fuel Stability Group <i>Chris Lewis, Chair, and Steve Zabarnick, Vice-Chair</i>	Ballroom ABC
10:30 AM - 10:50 AM	BREAK	Ballroom Foyer ABC
10:50 AM - 12:20 PM	Properties & Emissions Group <i>Edwin Corporan, Chair, and David Abdallah, Vice-Chair</i>	Ballroom ABC
12:20 PM - 1:50 PM	LUNCH ON OWN	
12:20 PM - 1:50 PM	CRC Aviation Steering Committee Working Lunch <i>Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair</i> <i>(Members and Invited Guests Only)</i>	Cobalt
1:50 PM - 3:20 PM	Emerging Fuels Group - Session 2	Ballroom ABC
3:20 PM - 3:40 PM	BREAK	Ballroom Foyer ABC
3:40 PM - 5:40 PM	Emerging Fuels Group - Session 3	Ballroom ABC
6:00 PM - 7:00 PM	Hosted Reception	Ballroom Foyer ABC

Thursday, May 5, 2011

Meeting Room

7:00 AM - 8:00 AM	Breakfast Buffet	Ballroom Foyer ABC
8:00 AM - 9:00 AM	Advanced Research & Test Methods Group <i>Robert E. Morris, Chair, and Jim Kinder, Vice-Chair</i>	Ballroom ABC
9:00 AM - 10:00 AM	Publications Group <i>Tedd Biddle, Chair, and Melanie Thom, Vice-Chair</i>	Ballroom ABC
10:00 AM - 10:20 AM	BREAK	Ballroom Foyer ABC
10:20 AM - 11:05 AM	Fuels System Safety Group <i>Mark Orr, Chair, and Nathan Diedrich, Vice-Chair</i>	Ballroom ABC
11:05 AM - 11:35 AM	CRC Aviation Technical Committee <i>Bill Taylor, Chair, and Chi-Ming Lee, Vice-Chair</i>	Ballroom ABC
11:35 AM - 11:50 AM	CRC Aviation Committee Meeting Wrap-up & Discussion <i>Joanna Bauldreay, Chair, and Tim Edwards, Vice Chair</i>	Ballroom ABC
11:50 AM	End of meetings	
12:40 PM - 6:00 PM	Meet in front of hotel to board buses for optional Boeing Tour <i>(preordered ticket required)</i> Bus leaves at 12:45 pm	

Meeting Agenda

CRC Activity: **Aviation Gasoline & Piston Fuels Group**

Roger Gaughan, Chair, and Dave Atwood, Vice Chair

Date: Monday, May 2, 2011

Time: 1:00 - 6:00 pm

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *EPA update on Leaded Avgas*

Glenn Passavant

G100UL Fuel Testing

Tim Roehl, GAMI Inc.

Swift Fuels Testing

Jon Ziulkowski, Swift Enterprises

Materials Compatibility Testing

Nathan Diedrich, Cessna Aircraft Company

BREAK 3:00 - 3:30 PM

Lean Boost-Operating Turbo Engines on Lower Octane Fuels

Robert Midgley, Shell

Standard Guide for Evaluation of New Fuels...ASTM TF Update

Melanie Thom, Baere Aerospace

100VLL ASTM Ballot Update

Ron Wilkinson, AvSouth

FAA Technical Center Aviation Fuel and Engine Test Facility (AFETF) Update

Dave Atwood, FAA Technical Center

Superabsorbent Polymer Contamination of Avgas

Linda Gallaher and Thomas Smagala, Chevron Global

New Business

Adjournment

Meeting Agenda

CRC Activity: CRC Introduction & Overview

Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 8:00-8:30 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Opening of the 2011 CRC Aviation Meeting*

Joanna Bauldreay, Shell Global Solutions Downstream

Welcome
Call to Order
Introduction
Op

Meeting Items of Interest

Jan Tucker, Coordinating Research Council

Activities
CRC Group/Panel Memberships

Membership and Information Exchange/ Ownership

Brent Bailey, Coordinating Research Council

Aviation Committee Status / Current Activities

Brent Bailey, Coordinating Research Council

Open Forum - Member Issues

Meeting Agenda

CRC Activity: **Fuel Handling & Contamination Group**

Haydee Carlton, Chair, and Jack Buffin, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 8:30 - 9:45 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Microbial Contamination Evaluation of USAF Fuel Systems During JP-8 to Jet A Transition Demonstration: An Interim Report*

Marlin Vangsness

Development of Quantitative Real-Time PCR Assays for Characterization of Microbial Fuel Contamination

Oscar N. Ruiz

Adjournment

Meeting Agenda

CRC Activity: **Operability Group**

John Rhode, Chair, and Rob Midgley, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 10:05 - 11:05 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *USAF Conversion from JP-8 to Jet A-1 OCONUS (Outside Continental US)*

Mel Regoli, Air Force

Aquarius

Vic Hughes, Consultant

Resolver

Vic Hughes, Consultant

Adjournment

Meeting Agenda

CRC Activity: **Production & Delivery Group**

Fred Cornforth, Chair, and Ron Osman, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 12:35 - 1:50 PM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Ultra Low Sulfur and Lubricity Issues*

Ron Osman

Phenols in Jet Fuel

Roger Gaughan

Sample Cans and Particulate Testing

Michael Lam

Follow Up Discussion - Distribution Tracking

Fred Barnes

Adjournment

Meeting Agenda

CRC Activity: **Low Temperature Group**

Don Phelps, Chair, and Dennis Hoskin, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 1:50 - 2:20 PM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *FSII Reduction Program*

Don Phelps

Overview of Project AV-11-09 on Aviation Fuel Cold Flowability Test

Garry Rickard

Adjournment

Meeting Agenda

CRC Activity: **Emerging Fuels Group - Session 1**

Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair

Date: Tuesday, May 3, 2011

Time: 2:40 - 4:40 PM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Opening remarks*

Joanna Bauldreay and Tim Edwards

Overview of ASTM Alternative Aviation Fuel Certification Task Forces

George Wilson, Sierra

CAAFI Cert/Qual Update

Mark Rumizen, FFA

ASTM Task Force on Synthesized Kerosene with Aromatics (SKA)

Cliff Moses, Consultant

Questions

Sasol IPK with Alkylated Benzene for Semi-Synthetic Jet Fuel

Cliff Moses, Consultant

Update on GTL R&D Projects

Joanna Bauldreay, Shell

Navy Alternative Fuel Research

Sharon Beerman-Curtin, U.S. Navy

AF Alternative Fuel Certification

Betty Rodriguez, U.S. Air Force

Questions

Adjournment

Meeting Agenda

CRC Activity: **Fuel Stability Group**

Chris Lewis, Chair, and Steve Zabarnick, Vice-Chair

Date: Wednesday, May 4, 2011

Time: 8:00 - 10:30 AM

Place: Hyatt at Olive 9
Seattle, Washington
Ballroom ABC

Agenda: *The Validity of Using Anti-Oxidant Post Processing*

Bob Morris, NRL, George Wilson, SwRI, and Pam Serino, DLA Energy

Breakpoint Stability Over Time and Distance

George Wilson, SwRI

Thermal Stability Work at University of Sheffield

Chris Wilson, U. of Sheffield

Assessment of m-Toluidine as a Valid Method for Accelerated Thermal Stability Testing

Brad Wall, Rolls Royce

Thermal Stability of Endothermic Fuels

Tim Edwards, AFRL

Adjournment

Meeting Agenda

CRC Activity: **Properties & Emissions Group**

Edwin Corporan, Chair, and David Abdallah, Vice-Chair

Date: Wednesday, May 4, 2011

Time: 10:50 AM - 12:20 PM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Progress Report on the Sulfur Survey Update (CRC Project AV-1-10)*

Bill Taylor

EASA SULPHUR Study: Reduction of Sulphur Limits in Aviation Fuel Standards

Edwin Corporan for Erika Herms

NASA Low Emissions Fuel Flexible Combustor Development

Chi-Ming Lee, NASA

Filtration Characteristics of HRJ Fuels

Mel Regoli, AFPET

Air Force Alternative Fuels Emissions Evaluations

Edwin Corporan, AFRL/RZPF

Adjournment

Meeting Agenda

CRC Activity: **Emerging Fuels - Sessions 2 and 3**

Joanna Bauldreay, Chair, and Tim Edwards, Vice-Chair

Date: Wednesday, May 4, 2011

Time: 1:50 pm - 5:40 pm

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *DLA Energy Update*

Pam Serino, DLA Energy

AlfaBird Project Update

Joanna Bauldreay

Progress Report on CRC Project AV-10-09 (aromatics/distillation)

Cliff Moses, Consultant

Update on Alcohol-to-Jet Task Force (SPK)

Josh Taylor, Gevo

Update on Alcohol-to-Jet Task Force (SKA)

Kevin Weiss, Byogy

BREAK 3:20 - 3:40 PM

Virent Catalytic Renewable Aviation Fuel Technology

Paul Blommel, Virent

Alternative Fuel / Material Compatibility

John Graham, UDRI

Rentech Update

Bob Freerks, Rentech

Purdue Industry Collaboration on Fuel System Testing

Denver Lopp, Purdue University

Renewable Aromatics & Cycloparaffins for Aviation Fuel via the Catalytic Hydrothermolysis (CH) Process

Ed Coppola, ARA

Non-CO₂ Combustion Effects

Russ Stratton, MIT

Adjournment

Meeting Agenda

CRC Activity: **Advanced Research & Test Methods Group**

Robert E. Morris, Chair, and Jim Kinder, Vice Chair

Date: **Thursday, May 5, 2011**

Time: **8:00 AM - 9:00 AM**

Place: **Hyatt at Olive 8**
Seattle, Washington
Ballroom ABC

Agenda: *Call to Order*

Robert Morris

Adoption of 2010 minutes

Jim Kinder

Update on Dielectric Constant Measurement and Impact on FQIS

Jean-Phillipe Belieres, Boeing Commercial Airplanes

Update on the US Army's Fuel Contamination Detection Efforts

Joel Schmitgal, US Army TARDEC

New Business

Discussion

Adjournment

Meeting Agenda

CRC Activity: **Publications Group**

Tedd Biddle, Chair, and Melanie Thom, Vice Chair

Date: Thursday, May 4, 2011

Time: 9:00 AM - 10:00 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Call to Order*

Tedd Biddle

Approval of 2010 minutes

Melanie Thom

Status Report: 2011 Fourth Edition Handbook of Aviation Fuel Properties

Tedd Biddle

• *Air Solubility Plots*

Melanie Thom

• *Surface Tension Measurements*

Bob Morris

• *Specific Heat Measurements*

Jim Kinder / Tim Edwards

• *Plots*

Cliff Moses

Background, Status and
Going Forward Plan

Background, Status and
Going Forward Plan

New Business

• *CRC AV-12-10 Russian Fuel Data*

Cliff Moses

Adjournment

Meeting Agenda

CRC Activity: **Fuel Systems Safety Group**

Mark S. Orr, Chair, and Nathan Diedrich, Vice-Chair

Date: Thursday, May 5, 2011

Time: 10:20 AM-11:05 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Welcome*

El Study into Conductivity Requirements for the Safe Ground Handling of Jet Fuel

Rob Midgley, Shell

IP583 FAME in Jet Method (FIJI)

Paul Spitteler, Stanhope-Seter

Adjournment

Meeting Agenda

CRC Activity: Aviation Technical Committee

Bill Taylor, Chair and Chi-Ming Lee, Vice-Chair

Date: Thursday, May 5, 2011

Time: 11:05 -11:35 am

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

Agenda: *Call to Order*
Adoption of May 2010 Minutes
Membership
Group Reports - Action Item Summary
New Business
Action Items
Next Meeting / Adjournment

Meeting Agenda

CRC Activity: Aviation Committee Meeting Wrapup & Discussion

Joanna Bauldreay, Chair and Tim Edwards, Vice-Chair

Date: Thursday, May 5, 2011

Time: 11:35 - 11:50 AM

Place: Hyatt at Olive 8
Seattle, Washington
Ballroom ABC

12:40 PM **Meet in front of hotel to board buses for optional Boeing Tour**
(preordered ticket required)
Bus leaves at 12:45 pm