

**Subcommittee on Aircraft Safety**  
**Spring 2103 Meeting Minutes**

---

**Meeting location:** William J. Hughes Technical Center, Atlantic City, NJ

**Meeting date:** March 12 – 14, 2013

<p><b>Purpose:</b> SAS Guidance Review for FY 2015 R&amp;D Budget</p> <p><b>Facilitator:</b> John Wiley, FAA DFO</p> <p><b>Note taker:</b> Jim White, Lumark Technologies</p>
---

Day 1 - March 12, 2103

A<sup>1</sup> Welcome Remarks

Presenters: John Wiley, John White, Cathy Bigelow

Discussion: John Wiley (FAA, DFO) and John White opened the meeting by welcoming the Subcommittee on Aircraft Safety (SAS) members, FAA presenters, and other attendees present and on the phone. John mentioned that Joe Del Balzo, SAS Chair, would not be able to attend and that John White would chair this meeting. John White announced that Bill Rosenkrans had retired from the SAS. He asked that each of the SAS members “sign-up” to take the lead on preparing Findings & Recommendations (F&R) for each presentation.

B REDAC Roles & Responsibilities

Discussion: Cathy Bigelow presented *REDAC and Subcommittee: Roles and Responsibilities*. This presentation covered the legislative basis for the REDAC and the Subcommittee on Aircraft Safety, and the role of the REDAC/SAS during the preparation of the FAA research portfolio.

Conclusion: John White commented that the SAS appeared to be on track with FAA budget preparations. John Wiley asked that the SAS finalize their F&R before they adjourn.

---

<sup>1</sup> Letter designations represent location of presentation in the binders distributed at the meeting.

## C Budget Review

Presenter: Mike Gallivan

Discussion: Mike explained that the budget picture for FY 2013 through FY 2015 remains unclear. The Continuing Resolution, Sequestration, and the OMB Passback for the FY 2014 budget will impact budget planning. The Out Year Targets (on Slide 11) are the original targets provided and do not reflect the current climate.

Conclusion: The SAS commented that their guidance will be affected by the level of flexibility established by the Administrator, but for now they would focus at the project level.

## D FY 2015 AVS R&D Portfolio Review

Presenter: Robert A. Pappas

Discussion: Rob presented *FY 2015 Aviation Safety R,E&D Portfolio*. Rob highlighted the AVS R&D mission statement, lifecycle management of requirements, and the current status within the portfolio process. He presented the Program Planning Team (PPT) financial summaries. He stated that the FY 2016 AVS Strategic Guidance was already under way and that AVS is getting away from prescriptive guidance and encouraging the Technical Community Representative Group (TCRG) to also take a more strategic view. There was some discussion regarding recent OMB Passback cuts to Human Factors programs. The consensus is that OMB wants to see more performance outcomes identified in the budget documents.

Conclusion: Rob stated that now is the time for the SAS to influence the FY 2016 strategic guidance and that the SAS can ask questions regarding the implementation of the research. He mentioned that he needs R&D facility data to develop “per-unit” costs base-lined against competitors. This presentation addressed Action Items 1 and 9 from the previous SAS meeting. Action Item 1 was addressed with a handout<sup>2</sup>.

## E Strategic Plan

Presenter: John Wiley

Discussion: John informed the SAS that he had initiated an effort within the Aviation Research Division (ANG-E2) to prepare a 10-year strategic plan for Aviation Research. An early draft of the nine topic areas covered in the plan is complete but not ready for distribution. He added that the goal is to present a draft version to the SAS after stakeholder review at the next SAS meeting. The plan includes a bottom-up and top-down approach that addresses the continuity of research capabilities by developing appropriate laboratories and right people.

---

<sup>2</sup> Handout 1: Non-Top 60 Requirements delivered to SAS by Rob Pappas on March 13, 2013.

Conclusion: John Wiley introduced Alanna Randazzo as the new Manager of the Software and Electronics Section (ANG-E271) and Michel Hovan as the new Portfolio Manager for the Division (ANG-E2).

Action Item: Present the Draft ANG-E-2 Strategic Plan at the next SAS meeting.

Person Responsible: ANG-E2 Division Manager

Due date: August 2013 SAS Meeting

## F Aeromedical Research

Presenters: Robert Johnson (with Jean Watson, Estrella Forster, and Jeff Gardlin on the phone)

Discussion: Robert presented *FY 2015 Aircraft Safety PPT Portfolio Review - Aerospace Medical Research (AM) BLI A11.j*. He commented that there are over 600,000 pilots in the United States and that airplanes have performance manuals but people do not. He discussed the AM research areas, capabilities (laboratories, simulators, and people), and Quad charts for each of the four AM FY 2015 requirements. Jeff Gardlin presented four Quad charts for the FY 2015 Fire and Cabin Safety (FCS) AM requirements.

Conclusion: The outputs of AM research include educating and alerting FAA Flight Surgeons regarding Agency policy. System-level crashworthiness research complements related work at NASA and is more specific (spinal and lumbar) and focused on tolerance of the human body.

Action Item: Provide a high-level rationale for prioritizing Aeromedical requirements at the next SAS meeting and deep-dive at the Spring 2014 SAS meeting

Person Responsible: Robert Johnson

Due date: August 2013 SAS meeting

Action item: Update Fire and Cabin Safety Quads charts with correct Out-year funding levels.

Person responsible: Rob Pappas

Due date: No later than August 2013 SAS meeting.

## G NextGen – Weather Technology in the Cockpit

Presenters: Gary Pokodner (with Steve Abelman on the phone)

Discussion: Gary presented *FY 2015 Aircraft Safety PPT Portfolio Review - Weather Technology in the Cockpit (WTIC) BLI – A12.d*. He identified turbulence, general aviation lethality rates, and efficient use of meteorological (MET) data as key program elements. The program supports standards and requirements not delivery of weather products. Primary consumers are Aircraft Certification (AIR) and Flight Standards. He presented Quad charts for the four FY 2015 research requirements.

Conclusion: Gary addressed Action Item #8 from the previous SAS meeting by providing a copy of the August 2012 SAS WTIC presentation to a member of the Human Factors Subcommittee. Steve Abelman stated that the key is to quantify operational benefits and help

build business cases. The current metric is the release of a standard with the intuitive belief that it will improve safety.

#### H Flightdeck/Maintenance/Systems Integration Human Factors

Presenters: Kathy Abbot and Tom McCloy

Discussion: Kathy presented *FY 2015 Aircraft Safety PPT Portfolio Review - BLI A11.g Flightdeck/ Maintenance/ Systems Integration Human Factors*. She distinguished between this, the core HF program, and the work in NextGen. Slide 5 identifies the level of budget cuts in FY 2014 from the OMB Passback. Kathy went into some detail regarding upset recovery and its relationship to two other BLIs (Slide 7) and the fact that they are looking at the full range of upset, including reaction and mitigation to startle. Kathy presented Quad charts for eight FY 2015 requirements.

Conclusion: It is not clear how the OMB Passback cuts will impact the HF Roadmap. The SAS also referred to an apparent trend that several aircraft technology implementations are ahead of the planned R&D.

#### I NextGen – Flight Deck Human Factors

Presenters: Kathy Abbot and Tom McCloy (Dan Herschler on phone)

Discussion: Kathy presented *FY 2015 Aircraft Safety PPT Portfolio Review - NextGen Flight Deck Human Factors BLI A12.c NextGen Air/Ground Integration Human Factors*. She informed the SAS that the requirements under this BLI are prioritized like the core requirements but the NextGen Office (ANG-E) does the programming. Kathy spoke about the capabilities (people and simulators) at Civil Aerospace Medical Institute (CAMI), Volpe National Transportation Center, and NASA; and the leveraging of industry R&D investments at Honeywell. She presented Quad charts for six FY 2015 requirements and linkages between the requirements and NextGen Operational Improvements.

Conclusion: Program outputs support recommendations for regulatory guidance for aircraft certification and approval of operations for NextGen.

#### J Fire Research and Safety

Presenters: Jeff Gardlin (on phone) and Gus Sarkos

Discussion: Jeff presented *FY 2015 Aircraft Safety PPT Portfolio Review - Fire Research and Safety Portfolio Review*. He spoke about the transportation of lithium batteries, recent freighter fires, future risk of fire accidents, and related NTSB cargo airplane fire protection recommendations. Jeff also discussed unknown smoke and odor incidents and the evolution of improved FAA flammability test standards for aircraft interior materials. He emphasized the fire safety program capabilities (people and laboratories) and presented a Quad chart for the FY 2015 research requirement.

Conclusion: SAS members commented that the smoke and odor research is timely and necessary and that overall the program is forward looking with proactive R&D.

K Advanced Materials/Structural Safety

Presenters: Larry Ilcewicz (on phone), Joseph Pelletiere, Jeff Gardlin (on phone) and Curtis Davies

Discussion: Larry presented *FY 2015 Aircraft Safety PPT Portfolio Review - BLI A11.c - Advanced Materials and Structural Safety (AMASS) - Advanced Materials and Structures - Crashworthiness*. He explained the FAA approach to composite safety and certification initiatives (Slide 5) and the breath of FAA composite team members and the importance of teammates outside the FAA (Slide 7). Larry presented Quad charts for six FY 2015 research requirements. Joe presented the crash dynamics roadmap (Slide 15) and explained the “Single Process Crashworthiness”. He presented Quad charts for two FY 2015 research requirements.

Conclusion: The work under this program is different than related work done by NASA as it will provide a more analytical approach and assess larger scale impacts to the fuselage.

L Aircraft Icing

Presenters: Tom Bond and Jim Riley

Discussion: Tom presented *FY 2015 Aircraft Safety PPT Portfolio Review - Aircraft Icing 6DB - With an update on Icing Weather Tasks A11.K*. He identified research requirements that support continued operational safety (COS), standards and policy, and certification. Tom presented Quad charts for five FY 2015 research requirements and emphasized that industry gets a significant return on investment for FAA research that supports Appendix C Icing certification and COS. Tom identified those requirements that are funded through the Aviation Weather Research Program (AWRP).

Conclusion: Research on ice crystal and supercooled large droplet (SLD) icing conditions supports a more robust enforcement and a means of compliance.

M Weather Program

Presenters: Steve Abelman and Roger Sultan (both on phone)

Discussion: Steve presented *FY 2015 Aircraft Safety PPT Portfolio Review - Weather Program A11.k*. He mentioned that he was filling in for Warren Fellner. The Weather Program addresses issues related to safety, efficiency, and capacity. A portion of the program focuses on AVS weather related requirements (Slide 5). The balance of the requirements are prioritized and scored through the Weather Program Planning Team. Steve presented Quad charts for ten AWRP research requirements. Roger Sultan presented three Quad charts for the AVS related requirements.

Conclusion: The presentation included a handout<sup>3</sup> that responded to Action Item #7 from the Fall 2012 SAS meeting. The SAS members will review the information in the handout and discuss as necessary at the next SAS meeting.

O System Safety Management

Presenters: Mike Basehore, Warren Randolph (both on phone), Katherine Lemos, and Hossein Eghbali

Discussion: Mike presented *FY 2015 Aircraft Safety PPT Portfolio Review - System Safety Management (SSM) BLI A11.h*. He emphasized that the goal of the SSM program was to identify and analyze emerging threats in a cooperative nature with industry. This means reaching out to all who fly in the National Airspace System (NAS). Mike presented Quad charts for four core research requirements and one for F&E sponsored research, NextGen – System Safety Management.

Conclusion: There are no research requirements for SMS in FY 2015.

The Digital System Safety presentation scheduled for 3:30 PM on March 12, 2013 was moved to the morning of March 14, 2013.

SAS members reviewed their F&R homework assignments and the list of new action items from Day 1 presentations.

Meeting adjourned at 5:00 PM.

---

<sup>3</sup> Handout #2: 2011 Quality Assessment of COSPA.

Day 2 - March, 13, 2013

Meeting commenced at 8:00 AM

The SAS members reviewed the draft Findings and Recommendations from the previous day and pending action items. The SAS confirmed that Action Item # 6 from the previous SAS meeting was closed with the confirmation that Multi-Radar Multi-Sensor (MRMS) capability is expected to be implemented operationally at NOAA in early FY 2014.

John Wiley presented *An Overview of the William J. Hughes Technical Center*. He covered aviation activities and programs; Government, academic, and industry partnership; and FAA R&D with an emphasis on the Aviation Research Division ANG-E2. John introduced Rich Lyon as the Acting Research Director of the Tech Center.

SAS members took tours of research laboratories at the William J. Hughes Technical Center.

P Continued Airworthiness – Flight Control Mechanical System

Presenters: Paul Siegmund (on phone), Wes Ryan (on phone), and Dave Sizoo (on phone)

Discussion: Robert Jones presented *FY 2015 Aircraft Safety PPT Portfolio Review - Transport & Small Airplane Directorates (TAD & SAD) Part of BLI A11.e System Safety Management*. He emphasized that this research is focused on Part 23 aircraft and that one of the key outcomes is enabling the use of low-cost systems that provide envelope protection and increased situation awareness. He presented the Quad chart for the FY 2015 research requirement. There was some discussion regarding the FAA response to the SAS F&R #4 (AF447 accident) from the Fall 2012 SAS meeting.

Conclusion: Training is a necessary component and it is addressed under a human factors requirement (HF-15-01) and through collaboration with industry. Changes to either the HF or FCMS requirement are coordinated through the sponsoring organization. The SAS closed recommendation F&R #4 from the Fall 2012 SAS meeting.

Q Continued Airworthiness – Structural Integrity Metallic

Presenters: Mark Freisthler (on phone) and Mark Orr

Discussion: Mark presented *FY 2015 Aircraft Safety PPT Portfolio Review - Structural Integrity Metallics (SIM) Part of BLI A11.e Continued Airworthiness*. He emphasized that the focus of the research is on bonded repair technologies and small airplane risk analysis. He explained the role of the SIM TCRG (slide 6) and the in-house capabilities (laboratories and people – Slide 7). Mark presented four Quad charts for the FY 2015 research requirements. Mark Orr presented the Quad chart for the risk assessment and management of small and transport COS. He spoke to

the average age of the GA fleet (41 years) and the fact that fatigue was not included in the original design. GA represents a non-homogeneous fleet with a wide range of use.

Conclusion: The transport airplane segment can benefit from the probabilistic risk management factors for corrosion developed in this program. The SAS closed Action Item #2 from the previous SAS meeting based on the handout<sup>4</sup> of Airworthiness Directive History.

## R NextGen – Alternative Fuels for General Aviation

Presenter: Peter White (on phone) and Dave Atwood

Discussion: Peter presented *FY 2015 Alternative Fuels for GA Portfolio Review - NextGen BLI A11m*. He explained the linkage between this program and the Destination 2025 performance goal, petitions and potential litigation from environmental organizations, industry requests, and lack of a market driver to replace 100 low-lead fuels. Peter presented the Quad chart for the FY 2015 research requirement and the highlights from the Unleaded Avgas Transition Aviation Rulemaking Committee (UAT ARC) Final report and the UAT Action Plan.

Conclusion: The FAA Technical Center is the only place to test unleaded alternative fuels. Phase 1 will focus on fit-for-purpose fuel properties and performance.

Action Item: Provide information on out-year funding levels. (Dave Atwood)

Due Date: August 2013 SAS meeting

## S Terminal Area Safety

Presenters: Jeffery Schroeder, Don Stimson (on phone), and Andrew Cheng

Discussion: Jeffery presented *FY 2015 Aircraft Safety PPT Portfolio Review - Terminal Area Safety (TAS) Part of BLI A11.h System Safety Management*. He explained that the program would begin addressing helicopter issues in FY 2015 in the areas of final approaches when using advanced vision, guidance for helicopter taxi operations, and single-pilot RNAV/RNP operations. The latter two areas may remain in Human Factors. He presented Quad charts for six FY 2015 research requirements. He emphasized the integration of the Advanced Maneuvers (TAS-15-01) requirement with the FCMS and HF requirements related to upset recovery and prevention.

Conclusion: Most of today's simulators need fidelity improvements before they are used for upset prevention and recovery training. ASIAs may offer additional information on runway excursions due to unstable approaches. Jeff provided information regarding "lowering approach minima for helos enabled by GPS WAAS requires improved visual cues" (Slide 9). He informed the SAS that "minima" are for helicopter point-in-space approaches, not ILS approaches. The SAS Recommendation from the Spring 2011 meeting will remain open.

---

<sup>4</sup> Handout #3: Airworthiness Directive History (3 pages 0).

**T Center of Excellence (COE) for General Aviation Partnerships to Enhance General Aviation Safety, Accessibility, and Sustainability (PEGASAS)**

Presenter: Peter Sparacino

Discussion: Peter presented *FY 2015 Aircraft Safety PPT Portfolio Review – Center of Excellence for General Aviation PEGASAS*. He explained the decision by the Administrator to compete and then award a new COE for General Aviation. Peter gave an overview of PEGASAS membership and capabilities. The program does not have dedicated funding but relies on resources that come from the pool of technical program managers in ANG, ARP, and AVS.

Conclusion: The COE is a 10-year Cooperative Agreement that requires substantial involvement from the Government.

SAS members reviewed their F&R homework assignments and the list of new action items from Day 2 presentations.

Meeting adjourned at 4:15 PM.

Day 3 – March 14, 2013

Meeting commenced at 8:00 AM

SAS members reviewed draft F&R from Day 2. SAS members Chris Benich and Greg Bowles were on the phone.

**N Digital System Safety (includes NextGen Advanced Systems and Software Validation)<sup>5</sup>**

Presenter: Barbara Lingberg (on phone)

Discussion: Barbara presented *FY 2015 Aircraft Safety PPT Portfolio Review - Software and Digital System (SDS): BLI A11.n: Advanced System and Software Validation and BLI A11.d (partial): Aircraft Icing/Digital System Safety*. Barbara focused on the need for collaboration between different types of engineers to meet present and future challenges (Slides 4 and 5), and program capabilities (Slide 9). Barbara presented Quad charts for the three FY 2015 research requirements funded under the core research program and a Quad chart for the FY 2015 research requirement funded through the NextGen program. This later requirement Systems Considerations for Complex Software Intensive Systems (SDS-15-01) addresses issues unique to the systems level that represent a domain boundary shift for the program.

Conclusion: Traditional methods and processes to address software and digital systems will not be adequate. The SAS commented that the expertise issues that concerned the SAS in the past appear to be resolved yet the technical challenges remain. There are no glaring gaps in the

---

<sup>5</sup> This presentation was originally scheduled for Day 1, March 12, 2013.

program research but the breadth of the challenge to the FAA is significant. The SAS questioned their own ability to vet the entire scope of this area.

Action Item: Show explicit outputs and outcomes regarding wireless interfaces on the aircraft.

Person Responsible: Barbara Lingberg

Due date: August 2013 SAS meeting

#### U Continued Airworthiness – Engine NDE

Presenters: Jorge Fernandez and Cu Nguyen

Discussion: Jorge presented *FY 2015 Aircraft Safety PPT Portfolio Review – Engine Non-destructive Evaluation (NDE)*. He informed the SAS that the emphasis of the research is to support policy and rulemaking and that they are about halfway through a 20-year master plan. He presented the Quad chart for the FY 2015 research requirement. The recommended practice for sonic infrared inspection may be delayed due to work on volcanic ash.

Conclusion: The SAS commented that the collaboration with industry helps make this a model program.

Action Item: Provide out-year funding levels for Continued Airworthiness - NDE.

Person Responsible: Rob Pappas

Due date: August 2013 SAS meeting

#### V Propulsion and Fuel Systems

Presenters: Jorge Fernandez and Joe Wilson

Discussion: Jorge presented *FY 2015 Aircraft Safety PPT Portfolio Review - A11.b – Propulsion and Fuel Systems*. He informed the SAS that the emphasis of the research is to support policy and rulemaking and that they are about halfway through a 20-year master plan (part of the previous presentation). He commented that much information will be released after the research program is complete. Jorge presented the Quad chart for the FY 2015 research requirement and commented that the focus is on lifing critical rotating parts considering defects created during manufacturing.

Conclusion: Although the research program is expected to end in FY 2017, the FAA will find a way to answer any questions that remain following the conclusion of the research program.

#### W Aircraft Catastrophic Failure Prevention Research

Presenters: Jorge Fernandez and William Emmerling

Discussion: Jorge presented *FY 2015 Aircraft Safety PPT Portfolio Review - Aircraft Catastrophic Failure Prevention BLI A11.f*. He informed the SAS that key focus of this research

program evaluating predictive analyses for blade containment. Jorge presented the Quad chart for the FY 2015 research requirement.

Conclusion: Completion of research on metals is about 18 months away. The research on composites will take much longer as the research is just beginning.

Action Item: Provide an implementation plan for incorporating Aircraft Catastrophic Failure Prevention research into regulatory products.

Person Responsible: Jorge Fernandez

Due date: August 2013 SAS meeting

#### X Continued Airworthiness – Rotorcraft systems

Presenters: Chinh Vuong and Paul Swindell

Discussion: Chinh presented *FY 2015 Aircraft Safety PPT Portfolio Review - Rotorcraft Systems (RS) Part of BLI A11.e Continued Airworthiness*. He informed the SAS that focus of this program is to support continued operational safety (COS) of rotorcraft, including bird strikes. The program capabilities reside in the people (TCRG members) and partnerships (Government, industry, and foreign authorities). He presented Quad charts on three FY 2015 research requirements.

Conclusion: There is no FAA approval yet to use HUMS monitoring for usage credit.

Action Item: Investigate opportunities for FY 2014 funding for the Advanced Control Systems (RS-15-02) requirement based on progress in FY 2013.

Person Responsible: Chinh Vuong

Due date: August SAS meeting

#### Y Continued Airworthiness – Maintenance and Inspection

Presenter: Rusty Jones

Discussion: Rusty presented *FY 2015 Aircraft Safety PPT Portfolio Review - Maintenance & Inspection*. He informed the SAS that the focus of this research is to support development of a technical base of trained and qualified people by preparing guidance for inspectors and the industry. He presented Quad charts for two FY 2015 research requirements.

Conclusion: NDI impact detection capabilities will become more important as the number of composite aircraft on the ramp increase. The increased use of MRO (Maintenance, Repair and Overhaul) drives the need to develop risk-based oversight methodologies. The SAS commented that the overall program looks good.

#### Z Unmanned Aircraft Systems Research

Presenters: Jim Williams, Kerin Olson, Sherri Magyarits

Discussion: Jim and Kerin presented *FY 2015 Aircraft Safety PPT Portfolio Review - Unmanned Aircraft Systems (UAS) Research BLI A11.1*. Jim opened the discussion by providing a high level view of the UAS research program. The FAA developed a five-year UAS Integration Roadmap that is being vetted by OMB. Jim expects release of the Roadmap by early June 2013. Jim explained that integration of UAS into the NAS requires standards and processes for certification; policies and guidance to demonstrate regulatory compliance; and procedures and mitigation strategies to ensure safe UAS operations in all classes of airspace. Research provides the data and analyses to support each one. Much of the data to support rule-making will be collected from military operations. Success of the research will be measured by the speed at which UAS is introduced into the NAS. Jim closed his remarks by commenting that hosting the UAS program in AFS is the right choice due in part to the level of resources available. Kerin addressed the program capabilities by presenting the UAS R&D Portfolio Matrix Team (slide 5). This slide closes Action Item # 4 from the previous SAS meeting. Kerin presented Quad charts for nine FY 2015 research requirements. The requirement numbers represent the prioritized order.

Sherry Magyarits presented *UAS Integration into the National Airspace System - Concept of Operations (ConOps) Version 2.0*. The mature state vision of UAS in the NAS provides hooks for research activities and sets a level of expectations for the user. The ConOps assumes full NextGen implementation and associated capital improvements. The ConOps will not address small UAS (less than 55 lb.) as rule-making for that class is underway and they will not operate in a NextGen environment. UAS are aircraft and each one will have a pilot-in-command (PIC). Autonomous UAS operations are not permitted. FAA policy will control priority of airspace. There is no visual compliance, in that seeing is qualitative and sensing is quantitative. All UAS operations will be conducted under Instrument Flight Rules (IFR) flight plans.

Conclusion: The see and avoid rule will not be applied to UAS. FAA legal opinion argues that you can't put a machine or instrument between the human and the object. New regulations and rulemaking will be necessary. Next step is to work the ConOps down into a requirements shortfall. Jim Williams ended the discussion by reminding the SAS that integration of UAS into the NAS is a continuum.

Action Item: Release of the Roadmap will remain an open Action Item (#5 from previous SAS meeting).

Person Responsible: Jim Williams

Due date: June 6, 2013

SAS Recommendation Review

The SAS reviewed the status of open Findings and Recommendations from previous SAS meeting. This chart does not reflect F&Rs from this meeting.

Recommendation Number	Program/Description	FAA Recommendation	SAS Decision	
			Open	Close
Spring-2011-18	Terminal Area Safety/Flight Control & Mechanical Systems	Close	<b>Open</b>	
Fall-2012-01	<b>UAS:</b> The FAA Administrator should review whether the FAA is appropriately organized to address the UAS integration challenge and whether sufficient FAA RE&D resources are being devoted to the challenge	Close		<b>Close</b>
Fall-2012-02	<b>ASIAS:</b> FAA considers conducting research into connecting the human element with the operational events recorded by ASAP/FOQA data.	Close		<b>Close</b>
Fall-2012-03	<b>HF-Flight Deck:</b> The SAS recommends that AFS revisit their research needs to support the implementation of FAR 117 as well as approval and development of FRMS. The high level of industry interest and activity in this issue will likely necessitate funding for research and support in FY 2014 as well as FY 2015.	Close		<b>Close</b>
Fall-2012-04	<b>FC/MS:</b> If lessons from the AF447 incident regarding flight controls design and certification warrant new research, the SAS recommends the research be prioritized and accelerate for near-term completion.	Close		<b>Close</b>

Closing Remarks

John Wiley reviewed the two-year outlook for SAS meeting venues. This outlook replies to Action tem #11 from the previous SAS meeting.

Fall 2013; August 20 – 22, 2013; Washington, DC (At GAMA Headquarters)

Spring 2014; TBD; either CAMI or FAA Technical center

Fall 2014; TBD; Washington, DC

There was some discussion regarding new membership for the SAS, especially for software systems. The DFO and the SAS chair will begin discussions in this matter immediately. The FAA will also make an effort to get the presentation materials to the SAS members for their review about two weeks ahead of the meeting. The FAA asked the SAS members if they could share their views of future technologies that could impact aircraft safety. They were also reminded to prepare questions for the full REDAC and the Administrator prior to the next REDAC meeting.

John White thanked the SAS members and the FAA for their efforts and complimented the presenters for providing such high quality information. John Wiley also thanked the SAS and FAA participants and adjourned the meeting at 1:24 PM.

**AGENDA**

(Actual)

**Tuesday, March 12, 2013**

**Telephone Bridge (202) 493-4180, Passcode: 8255**

<b>Time</b>	<b>Subject</b>	<b>Presenter</b>
0800	Welcome	John White /John Wiley/ Cathy Bigelow
0810	<ul style="list-style-type: none"> <li>• Introductions</li> </ul>	
0815	<ul style="list-style-type: none"> <li>• Agenda Review</li> <li>• Discussion of changes and expectations</li> </ul>	
0830	Budget Review	Mike Gallivan
0847	FY15 AVS R&D Portfolio Review	Robert Pappas
0947	Strategic Plan	John Wiley
1000	Break	
1015	Aeromedical Research	Jean Watson /Bob Johnson
1105	NextGen - Weather Technology in the Cockpit	Gary Pokodner
1134	Flight Deck/Maintenance/System Integration Human Factors	Kathy Abbott/Tom McCloy
1220	Lunch	
1306	NextGen Human Factors	Kathy Abbott/Tom McCloy
1347	Fire Research and Safety	Jeff Gardlin/Gus Sarkos
1419	Advanced Materials/Structural Safety	Joe Pellettiere/Larry Ilcewicz/ Curt Davies
1505	Break	
1517	Aircraft Icing	Tom Bond/Jim Riley
1555	Weather Program	Roger Sultan /Warren Fellner
1625	System Safety Management	Mike Basehore/Warren Randolph/ Katherine Lemos/Hossein Eghbali
1645	Review Action Items and Recommendations	All
1655	Adjourn	

*Note: Dress code is business casual*

**Wednesday, March 13, 2013**

**Telephone Bridge (202) 493-4180, Passcode: 8255**

<b>Time</b>	<b>Subject</b>		<b>Presenter</b>
0800	Review Action Items and Recommendations		John White
0825	Division Overview	Director's Conf. Room	John Wiley
<b>TIME</b>	<b>TOUR</b>	<b>LOCATION</b>	<b>CONTACT</b>
0845	Fire Safety Tour:		Gus Sarkos
0900	Lithium Batteries	Bldg. 204	
0930	Cargo Compartment Fire Safety	Bldg. 275	
1000	Interior Material Flammability	Bldg. 287	
1030	FASTER Labs	Bldg. 211	John Bakuckas
1100	Fuels Lab	Bldg. 211	Dave Atwood
1130	Human Factors Lab	Bldg. 28	Kenneth Allendoerfer
1215	Lunch		
1303	Continued Airworthiness <ul style="list-style-type: none"> <li>Flight Control Mechanical Systems</li> </ul>		Robert Jones/Bob McGuire
1337	Continued Airworthiness <ul style="list-style-type: none"> <li>Structural Integrity Metallic</li> </ul>		Mark Freisthler/Michael Reyer/ John Bakuckas
1425	NextGen – Alternative Fuels for GA		Mark Rumizen/Dave Atwood
1450	Break		
1505	Terminal Area Safety		Jeff Schroeder/Andrew Cheng
1545	COE for General Aviation (PEGASAS)		Pete Sparacino
1600	Review Action Items and Recommendations		John White
1615	Adjourn		
1700	Dinner		Berkshire Grill 6105 Blackhorse Pike

	Egg Harbor Township, NJ
--	-------------------------

**Thursday, March 14, 2013**

**Thursday Telephone Bridge (888) 924-3230, Passcode: 668176**

<b>Time</b>	<b>Subject</b>	<b>Presenter</b>
0800	Review Action Items and Recommendations	John White
0810	Digital System Safety (includes NextGen Advanced Systems and Software Validation)	Barbara Lingberg/John Lapointe
0856	Continued Airworthiness <ul style="list-style-type: none"> <li>• Engine NDE</li> </ul>	Jorge Fernandez/Cu Nguyen
0913	Propulsion and Fuel Systems	Jorge Fernandez/Joe Wilson
0918	Aircraft Catastrophic Failure Prevention Research	Jorge Fernandez/Bill Emmerling
0939	Continued Airworthiness <ul style="list-style-type: none"> <li>• Rotorcraft Systems</li> </ul>	Chinh Vuong/Paul Swindell
1020	Break	
1030	Continued Airworthiness <ul style="list-style-type: none"> <li>• Maintenance and Inspection</li> </ul>	Rusty Jones/Dave Galella
1048	Unmanned Aircraft Systems Research	Jim Williams/Kerin Olson/Sherri Magyarits
1200	SAS Recommendation Review	John Wiley
1230	SAS Feedback	John White
1300	Future Meeting Planning and Discussion	John White
1324	Adjourn	John White

*Note: Dress code is business casual*

**ATTENDANCE**

**SAS Members:**

Chris Benich  
Greg Bowles  
Andy Lacher  
Jim Mangie  
Doug Rohn  
Todd Sigler  
John White (Acting Chair)  
John Wiley DFO

**Participants:**

Kathy Abbot  
Allan Abramowitz  
John Bakuckas  
Cathy Bigelow  
Tom Bond  
Fred Brooks  
Curtis Davies  
Gloria Dunderman  
Steven Edgar  
Hossein Eghbali  
Bill Emmerling  
Jorge Fernandez  
Paul Fontaine  
Tom Flournoy  
Dave Galella  
Sharon Graves  
John Hensyl  
Michel Hovan  
Robert Johnson

Cliff Johnson  
R. C. Jones  
Rusty Jones  
Charles Kilgore  
Ken Knopp  
John Lapointe  
Xiaogong Lee  
Katherine Lemos  
Rich Lyon  
Sherri Magyarits  
K. Maris  
Tom McCloy  
Robert McGuire  
Nelson Miller  
Curtis Nguyen  
Kerin Olson  
Mark Orr  
Maria Paine  
Robert A. Pappas

Joseph Pellitiere  
Gary Pokodner  
Alanna Randazzo  
Jim Riley  
Gus Sarkos  
Andrea Schandler  
Jeff Schroeder  
Vincent Schultz  
Chris Seher  
Peter Sparacino  
Traci Stadmueller  
Paul Swindell  
Isidore Venetos  
Tong Vu  
Chinh Vuong  
Ed Weinstein  
Jim White  
Jim Williams  
Joe Wilson  
John Zvanya

**On-phone:**

Steve Abelman  
Mike Basehore  
Tom Chidester  
Estrella Forster  
Mark Freisthler  
Mike Gallivan  
Jeff Gardlin  
Dan Herschler  
Larry Ilcewicz  
Barbara Lingberg

Debbie Prigal  
Warren Randolph  
Wes Ryan  
Paul Siegmund  
Dave Sizoo  
Corey Stephens  
Don Stimson  
Roger Sultan  
Jean Watson  
Peter White

### **ACTION ITEMS**

1. Present the Draft ANG-E-2 Strategic Plan at the next SAS meeting. (ANG-E2 Division Manager)
2. Provide a high-level rationale for prioritizing Aeromedical requirements at the next SAS meeting and deep-dive at the Spring 2014 SAS meeting. (Robert Johnson)
3. Update Fire and Cabin Safety Quads charts with correct out-year funding levels. (Rob Pappas)
4. Show explicit outputs and outcomes regarding wireless interfaces on the aircraft. (Barbara Lingberg)
5. Provide out-year funding levels for Continued Airworthiness – NDE. (Rob Pappas)
6. Provide an implementation plan for incorporating Aircraft Catastrophic Failure Prevention research into regulatory products. (Jorge Fernandez)
7. Investigate opportunities for FY 2014 funding for the Advanced Control Systems (RS-15-02) requirement based on progress in FY 2013. (Chinh Vuong)
8. Release of the UAS Roadmap will remain an open Action Item (#5 from previous SAS meeting). (Jim Williams)