



AVIATION RULEMAKING ADVISORY COMMITTEE (ARAC) MEETING

December 14, 2023 ***1:00 PM – 4:00 PM

- Welcome and Introductions
- Federal Advisory Committee Act (FACA) Statement
- Ratification of Minutes
- Status Updates and Recommendation Reports
 - Airman Certification System Working Group – Mr. David Oord
 - Training Standardization Working Group – Mr. Brian Koester
 - Part 65.101 Repairman Certificate Portability Working Group (Present Recommendation Report to ARAC: 06/2024) – Mr. Ric Peri
 - Transport Airplane and Engine (TAE) Subcommittee – Mr. Keith Morgan
 - Flight Test Harmonization Working Group – Mr. Brian P. Lee
 - ❖ Phase 4/Topic 22- Landing in Abnormal Configurations (Present Recommendation Report to ARAC: 06/2024)
 - ❖ Phase 4/Topic 26- Derate Thrust Procedures (Present Recommendation Report to ARAC: 06/2024)
 - Ice Crystals Icing Working Group (Present Recommendation Report to ARAC: 2024) – Ms. Melissa Bravin and Mr. Allan van de Wall
 - Engine Propulsion Integration Working Group
- Any Other Business
 - FAA Update on Regulatory Activities
 - Fiscal Year 2024 Meeting Dates
 - Thursday, December 14, 2023
 - Thursday, March 21, 2024
 - Thursday, June 20, 2024
 - Thursday, September 20, 2024

AVIATION RULEMAKING ADVISORY COMMITTEE DRAFT RECORD OF MEETING

MEETING DATE: September 21, 2023

MEETING TIME: 1:00 pm - 4:00 pm ET

LOCATION: The Aviation Rulemaking Advisory Committee (ARAC) held a hybrid meeting in person at the FAA Headquarters at 800 Independence Ave, SW, Washington, DC, 20591, in room Conference Room 8AB, and virtually on Zoom.

PUBLIC ANNOUNCEMENT: The Federal Aviation Administration (FAA) provided notice to the public of this ARAC meeting in a *Federal Register* notice published on September 5, 2023 (88 FR 60732).

ATTENDEES:

Committee Members	
David Oord (In-person)	Wisk, <i>ARAC Chair</i>
Justin Barkowski	American Association of Airport Executives (AAAE)
Tom Charpentier	Experimental Aircraft Association (EAA)
Ambrose Clay	National Organization to Insure a Sound Controlled Environment (N.O.I.S.E.)
Walter Derosier (In-person)	General Aviation Manufacturers Association (GAMA)
Gail Dunham	National Air Disaster Alliance/Foundation (NADA/F)
Stéphane Flori	Aerospace & Defense Industries Association of Europe (ASD)
Daniel Friedenzohn	Embry-Riddle Aeronautical University
Paul Hudson	FlyersRights.org
Randy Kenagy	Air Line Pilots Association (ALPA)
Chris Martino	Helicopter Association International (HAI)
Keith Morgan (In-person)	Pratt & Whitney <i>Chair, Transport Airplane and Engine (TAE) Subcommittee</i>
Ric Peri (In-person)	Aircraft Electronics Association (AEA) <i>Chair, Part 65.101 Repairman Certificate Portability Working Group</i>

Larry Rooney	Coalition of Airline Pilots Association (CAPA)
Yvette A. Rose (In-person)	Cargo Airline Association (CAA)
Chris Witkowski	Association of Flight Attendants (AFA)
Non-Members	
Doug Beneteau	General Electric Aviation
Tanya Boisseranc	Boeing
Kara Charles	Boeing
Melvin Davis	National Air Traffic Controllers Association
Maryann DeMarco	CAPA
Katie Edwards	Boeing
Olivia Fowler (In-person)	XTI Aircraft
Mary Fox	Boeing
Chris Kearney	Boeing
Brian Koester (In-person)	National Business Aviation Association (NBAA)
Brian Lee	Boeing Company <i>Flight Test Harmonization Working Group Chair</i>
Justin Madden	Airlines For America (A4A)
Adam Mercier	U.S. General Services Administration (GSA)
Chris Moore (In-person)	Teamsters Airline Division
Jerod Rhodes	United Parcel Service (UPS)
FAA Staff	
Lee Abbott	Flight Standards Service (AFS)
Tim Adams	AFS
Angela Clark	Aircraft Certification Service (AIR)
Paul Cloutier	AFS
Thuy Cooper (In-person)	Office of Rulemaking (ARM)
Martin Crane	AIR
Jim Crotty (In-person)	ARM, <i>Acting Designated Federal Officer</i>

Bryan Davis	AFS
Aliah Duckett (In-person)	ARM
Michelle Ferritto (In-person)	ARM
Robert Ganley	AIR
Natalie Greer	Office of the Chief Counsel (AGC)
Karen Lucke	AFS
Syerra Joyner (In-Person)	ARM – FAA Intern
Elie Nasr	AFS
Lakisha Pearson (In-person)	ARM
Paul Preidecker	FAA Contractor
Alberto Ramon	Office of Aviation Policy and Plans (APO)
James Sapoznik	AFS
Puja Sardana (In-person)	FAA Contractor
Abby Smith	Security and Hazardous Materials Safety (ASH)
Kristin Tullius	FAA Contractor
Alan Strom	AIR

Welcome and Introduction

Mr. Jim Crotty, Acting Designated Federal Officer (DFO), called the meeting to order at 1:01 pm ET. He reminded everyone that the meeting was being recorded, and he reviewed logistics for the hybrid meeting.

Mr. Crotty read the required FACA statement (Title 5, United States Code (5 U.S.C.); Appendix 2 (2007)). He stated that members of the public may address ARAC with permission of the Chair, Mr. David Oord.

Mr. Oord welcomed everyone to the meeting.

Ratification of Minutes

Mr. Oord asked for a motion to accept the July 20, 2023¹, ARAC meeting minutes. Mr. Walter Derosier motioned to accept the minutes, and Mr. Keith Morgan seconded the motion.

All ARAC members voted in favor of ratifying the minutes.

Status Reports/Recommendation Reports

A copy of the September 21, 2023, meeting packet, which includes working group presentations, can be found at:
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/index.cfm/document/information/documentID/6003.

Airman Certification Systems Working Group (ACSWG)

Mr. Oord, ACSWG Chair, provided the working group's status report. Mr. Oord reviewed membership, the summary of tasking, and the status of tasking, noting that there have been no changes. He stated that the group held a virtual meeting recently and hopes to have more updates at ARAC's December meeting. The group has no areas for ARAC consideration.

Mr. Ric Peri stated that the MOSAIC NPRM incorporates by reference the Light-Sport Aircraft (LSA) repairmen maintenance certification. He asked if the working group had done a gap analysis of maintenance Airman Certification Standards (ACS) that cover the differing categories of LSA, noting that sometimes the technology works in contradictory ways. Mr. Oord said that a gap analysis has not been done to date, but he thinks this would be valuable to include in the group's future work.

Training Standardization Working Group (TSWG)

Mr. Brian Koester, TSWG Chair, provided the working group's status report. The update included an overview of membership, a summary of tasking, a review of the schedule, the status of tasking, and areas for ARAC consideration, including review of the TSWG recommendation report. Mr. Koester noted that some membership applications are pending approval and potential members are currently acting as subject matter experts (SME) on the working group.

Mr. Koester reviewed the summary of tasking and the schedule. He summarized the following status of taskings:

¹ The September 21, 2023, meeting minutes can be found at:
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/index.cfm/document/information/documentID/6003

- Taskings 1 (schedule) and 2 (instructor curriculum) are complete.
 - FAA is revising the instructor curriculum.
- Anticipated recommendations:
 - September 2023:
 - Hawker 800 (for ARAC consideration at today's meeting)
 - Citation Excel
 - December 2023 or March 2024:
 - King Air 300
 - Challenger 300

Mr. Koester reviewed a chart showing the scope of the project, noting that it does not include all part 135 curriculum. He described the TSWG workflow including the Aircraft Type Action Team Tasks.

Mr. Koester reviewed the following areas for ARAC consideration:

New Action Teams:

- BE-300 King Air Action Team
- CL-30 Challenger 300 Series Action Team
- FAA is working to publish guidance for Adaptive Recurrent Training
- Reviewing methods to expedite the recommendation process

He added that, as of yesterday, the working group would like to ask for ARAC's consideration to edit the language to recommendation 5-2 on training circle approaches (particularly in business centered airports). Mr. Koester highlighted the importance of training for visual conditions that may arise while circling on landing approach, noting that currently this training is only being conducted at airports in New York, New York and Memphis, Tennessee. He recommended conducting this training at Teterboro Airport in Teterboro, New Jersey.

Mr. Koester reviewed the group's report, including the recommendations on training curricula and the appendices. Mr. Paul Hudson asked what percentage of the recommendations were for performance-based regulations (PBR) and what percentage were prescriptive. Mr. Koester stated that he is not certain and that the group evaluated all the requirements of training (included in the appendices) to ensure the program meets the requirements. He noted that they may lean toward more prescriptive at this time but that may change as guidance is developed. Mr. Hudson asked if the group was going to make any recommendations for PBR vs prescriptive, and Mr. Koester noted that he would not know until more guidance on training is released from the agency.

Mr. Hudson asked about a task force that was recently created and about their involvement in the group's work. Mr. Hudson also questioned whether members of the newly established task force consisted of passenger or general aviation representatives. Mr. Crotty noted that the Administrator's Office established the National Airspace System Safety Review Team in April 2023 but it is not a Federal advisory committee. Mr. Crotty was unclear about the membership selection process, but would send Mr. Hudson a link regarding the Safety Review Team.

Mr. Oord asked for a motion to accept the group's recommendation report. Mr. Morgan motioned to accept, and Mr. Desrosier seconded the motion. All ARAC members voted in favor of accepting the report. Mr. Oord confirmed he would submit the report to the FAA.

Part 65.101 Repairman Certificate Portability Working Group

Mr. Peri stated that there have been no changes in membership, tasking, nor schedule. He stated that the group submitted an interim report, which provides a status update of the group's progress, and the need for consistency in portability standards.

Mr. Peri described the following two focuses of the portability of repairmen certificates: 1) the portability of the qualifications and 2) the portability of the certificate. He noted that currently the portability of the certificate is prohibited by regulation, and that the qualification is driven by policy. Mr. Peri stated that the group reviewed over 20,000 repairmen certificates currently issued and found little to no consistency, highlighting need for standardization in repairmen certifications. He confirmed that each certificate comes with a repairman rating and described the process of getting an airman certification number that follows one throughout their career.

Mr. Peri clarified that the tasking of the working group is to consider workforce development, and with that in mind, the group is considering the lifecycle and career progression within the recommendations.

Mr. Hudson asked what the difference in a repairman and a mechanic is and Mr. Peri noted that, from a task perspective, a repairman does not have return to service authority; they must work for a certificate holder that does have that authority. The return to service authority would be under the authority of their employer's certificate allowing certificated people to supervise repairman work.

Mr. Peri said that a mechanic has full skill authority as well as return to service authority, and if qualified, can act a supervisor for return to service. He also provided clarification on foreign and domestic repair station requirements, noting that qualifications are almost identical, but certification is not.

Mr. Oord asked for a motion to accept the interim report. Mr. Peri motioned, and Ms. Yvette Rose seconded the motion. Ms. Rose asked if the interim report gets published, and Mr. Oord confirmed that it does. All ARAC members voted in favor of approving the report for submission to the FAA.

Transport Airplane and Engine (TAE) Subcommittee

Mr. Keith Morgan, the TAE Subcommittee Chair, provided the TAE Subcommittee status report update. He reviewed membership and stated that there are currently three active TAE Subcommittee working groups: Flight Test Harmonization (FTHWG), Engine Ice Crystal Icing (ICIWG), and the newly created Engine Propulsion Integration (EPIWG).

Mr. Morgan noted that the European Union Aviation Safety Agency (EASA) is no longer actively assisting FTHWG due to budgetary restrictions. He reviewed the schedule of deliverables:

September 2023

- FTHWG Dry Runway (for ARAC review and vote today)

December 2023

- FTHWG Narrow Runway

Ice Crystal Working Group (ICIWG)

Mr. Morgan noted that the membership slide is a bit out of date and will be updated. He stated that there were no changes to the tasking, and he reviewed the schedule of meetings, noting the December meeting in Germany may be canceled. Mr. Morgan summarized the status of tasking including many completed tasks, and the joint probability study currently in progress. He stated that the group is working toward their final report and does not need anything from ARAC at this time.

Engine Propulsion Integration Working Group Status

Mr. Morgan stated that the solicitation period for membership ended on August 11, 2023, noting that nominations are from most of the major engine and aircraft original equipment manufacturers (OEMs). He described the next steps, which includes finalizing nominations, selecting co-chairs (one engine, one aircraft), and developing the work plan. He anticipates the kick-off meeting at the beginning of 2024.

Mr. Oord asked if the working group anticipated the memberships would be approved by the kick-off meeting, and Mr. Morgan said likely not but that the plan would be to start work in the first quarter of 2024.

Flight Test Harmonization Working Group (FTHWG)

Mr. Morgan asked Mr. Brian Lee to provide the working group's status update and to describe the FTHWG recommendation report on Topic 33, Landing Distance on Dry Runway. Mr. Lee reviewed membership, the summary of tasking, and the schedule. Mr. Lee discussed the following high-level recommendations:

- Modify the dry runway landing distance regulation in 14 CFR part 25, § 25.125, based on the same hypotheses as those proposed in the FTHWG Topic 9 report, but considering the wheel braking on a dry runway.
- Recommend modification of appropriate operational factors for dispatch planning in the Operating Requirements to reflect the modified actual landing distance defined in Task 1.
- Recommend a follow-on review by an appropriate working group or body of proposed § 25.125, landing distance in the context of the various operating standards existing today.

Mr. Lee provided history on the topic and noted that since there is no historical record of safety issues associated with the factored landing distance from § 25.125, the technical assignment became one of making the assumptions consistent among Dry, Wet, and Time-of-Arrival, while maintaining approximately the same total factored distance being used in service. He showed a comparison of current landing distance standards to the group's proposed recommended standards and summarized the results of these changes.

Mr. Lee described the specific changes in regulatory language that the group recommended and provided justification for each. He noted that extensive guidance material for means of compliance has been drafted by the FTHWG and is included in the report. He reviewed the current and proposed new dry runway operating standards.

Mr. Oord asked for a motion to accept the FTHWG report. Mr. Derosier motioned, and Mr. Peri seconded the motion. Mr. Larry Rooney asked if assumptions were based on full max manually braking for updated landing distance requirements, and Mr. Brian Koester asked if the technology allows them to enter variable information to gain realistic data. All ARAC members voted to accept the report. Mr. Oord confirmed Topic 33 of the TAE is now closed out.

Other Business and FAA Updates

FAA Responses to ARAC Recommendations

Mr. Crotty provided the FAA response to ARAC's "Call to Action" Recommendation Report. In March 2021, the FAA assigned ARAC a new task to perform a "call to action" safety review of pilot certification standards. ARAC submitted the final recommendations report in June 2022, and the FAA concurred with all five following recommendations.

Recommendation 1— Congress immediately engage with DOT to eliminate the recent and unnecessarily restrictive interpretations of the Administrative Procedure Act that are delaying publishing time-critical aviation safety information, and implement a transparent pathway for effectively and efficiently publishing and maintaining the ACS documents that accommodates safety needs (including the National Transportation Safety Board (NTSB), FAA, and stakeholder input), permits timely changes, provides for predictable

revisions, permits for public consultation, promotes continued communication and interaction with community partners.

FAA Response – *The FAA published the ACS IBR NPRM in January 2023. The FAA is moving forward with the final rule. (The Fall Unified Agenda will display the publication date.)*

Recommendation 2—Establish a semi-permanent industry/agency collaborative body within FAA to maintain and update the ACS to ensure that training and testing remains correlated and corresponds to current regulations, procedures, equipment, aviation infrastructure, and safety trends.

FAA Response – *The FAA will continue to use the ACSWG to satisfy this recommendation.*

Recommendation 3—Publish an ex parte policy that supports a more welcoming approach to public stakeholder feedback, clearly and broadly defines informal rulemaking and handling of non-governmental feedback and incorporates into a process that supports ongoing development of the ACS, informational documents and FAA Knowledge Exams using the agency/industry collaboration that resulted in the successful pilot ACS already published. This will require creation and implementation of an ex parte training session to ensure all affected parties are educated on the policy, what constitutes informal rulemaking, when a communication is considered ex parte, and how to properly give and receive ex parte communications.

FAA Response – *On January 31, 2023, the FAA published the first edition of the Airman Testing Community Advisory on the FAA's [Airman Testing web page](#), which contains a link to the DOT's "[Guidance on Ex Parte Communications](#)" [Website](#).*

Recommendation 4—Establish a means for ongoing data evaluation based on the ACS codes, airman knowledge test reports, and practical exam reports for the purpose of ongoing improvement and collaboration between training and testing and to support emerging technologies.

FAA Response – *The FAA established a plan for data sharing and analysis in June 2023. We are also on track for developing a plan for regular reporting of correlation between ACS Codes/testing this month (September 2023). We will formulate a plan to address identified gaps/make improvements to standards and testing by December 31, 2023.*

Recommendation 5—Establish a process for continual improvement to the FAA standards, guidance, and testing with change management and communication maintained with the training community, to include methods to ensure a balanced test map and means to include new and/or change existing requirements for a sound airman certification process.

FAA Response – *FAA established a process to house newly-developed and revised ('living document') processes for: Standards, IBR, Reference Materials, Testing, and Stakeholder Communications*

Mr. Derosier asked if the ex parte slides could be shared, and Mr. Crotty said yes, he thought they were shared during a recent ex parte presentation done for ARAC. Mr. Peri asked if the presentation could be recorded for use as needed, and Mr. Crotty said that could be helpful.

ARAC Updates

Mr. Crotty stated that the FAA does not have any updates on the ARAC membership packet. It is still under review.

Regulatory Updates

Mr. Crotty highlighted the number of rulemaking documents that the FAA published in FY 2023:

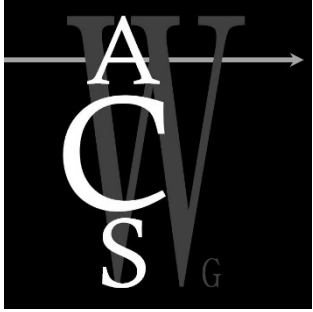
- 14 Final Rules (including Airport SMS and Secondary Barriers)
- 11 NPRMS (including SMS, MOSAIC, and Powered-lift)
- 4 SFARS (Flight Restrictions)

He noted that FAA hopes to publish two more NPRMS before September 30, 2023.

Mr. Crotty encouraged industry members to comment on rulemakings as much as they can. Mr. Crotty noted that positive comments on rulemakings are welcomed from industry to help emphasize the importance or significance of a rule.

Adjournment

Mr. Oord stated that the next meeting is on December 14, 2023. Mr. Oord thanked everyone, and he adjourned the meeting at 2:47 pm ET.



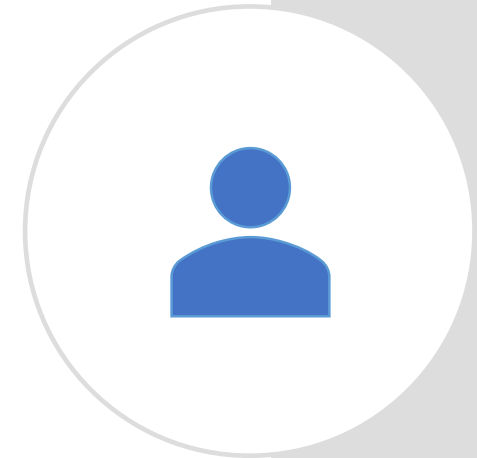
Airman Certification System Working Group Status Report to the Aviation Rulemaking Advisory Committee

David Oord
Working Group Chair

December 14, 2023

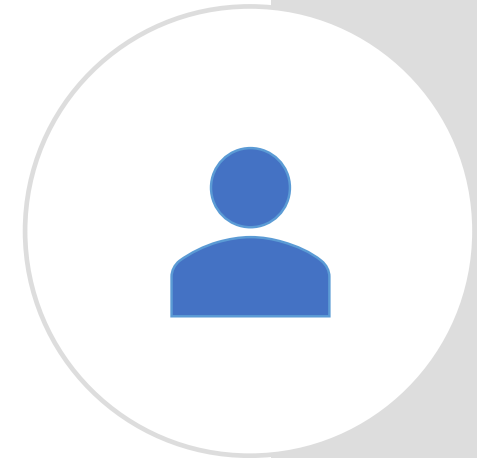
MEMBERS of ACSWG - INDUSTRY

- David Oord, Wisk
- Paul Alp
- Cindy Brickner, SSA
- Paul Cairns
- Kevin Comstock, ALPA
- Mariellen Couppee, Independent
- Eric Crump
- David Dagenais, FSCJ
- Maryanne DeMarco, CAPA
- Rick Durden, Independent
- David Earl, Flight Safety
- Tom Gunnarson, Wisk
- John Hazlet Jr., RACCA
- Jens Hennig, GAMA
- Chuck Horning, ERAU
- David Jones, Avotek
- John King, King Schools
- Janeen Kochan, ARTS Inc.
- Kent Lovelace, UND
- Justin Madden, A4A
- John McWhinney, King Schools
- Crystal Maguire, ATEC
- Nick Mayhew
- Jimmy Rollison, Independent
- Mary Schu, Mary Schu Aviation
- Roger Sharp, Independent
- Jackie Spanitz, ASA
- Burt Stevens, CFI Care
- Robert Stewart, Independent
- Tim Tucker, Robinson
- Donna Wilt, SAFE
- Roger Woods, Leonardo
- Philipp Wynands, Metro Aviation



MEMBERS of ACSWG – FAA

- Barbara Adams
- Bill Anderson
- James Ciccone
- Bryan Davis
- Joel Dickinson
- Mike Duffy
- Troy Fields
- Ramona Fillmore
- Adam Giraldes
- Laurin J. Kaasa
- Jeffrey Kerr
- Karen Lucke
- Mike Millard
- Anne Moore
- Kevin Morgan
- Margaret Morrison
- Richard Orentzel
- Katie Patrick
- Andrew Pierce
- Robert Reckert
- Jason Smith
- Chris Thomas
- Shelly Waddell Smith
- Robert Terry
- Chris Thomas
- Matt Waldrop
- Stephanie Williams
- Bill Witzig



SUMMARY OF TASKING

- Provide recommendations regarding standards, training guidance, test management, and reference materials for airman certification purposes.
- Continuation of Pilot, Instructor, and Aircraft Mechanic certificates.
- Revisions for Private, Commercial, Remote Pilot certificates and the Instrument Rating.
- Added Sport and Recreational Pilot certificates – airplane.
- Added Private, Commercial, ATP, and Instructor certificates and Instrument Rating in additional aircraft categories–
 - Rotorcraft, powered lift, lighter-than-air, glider, etc.

SCHEDULE

- Interim reports
 - PVT, COM, ATP, Instructor, and AMT certificates and Instrument Rating – no later than June 2018 - complete
- Final recommendation report TBD
 - Unable to complete due to incomplete taskings and restrictions

SCHEDULE

- **2023 Meetings –**
 - April 18 (virtual)
 - September 19 (virtual)
- **2024 Meetings – TBD**

STATUS OF TASKING

- Progress on Standards, Guidance, and Test Management on hold
 - Publication of completed ACS documents waiting on Incorporation by Reference (IBR) rulemaking
- Data Analysis workgroup – formed in response to Call to Action Final Report
 - Means for ongoing data evaluation based on ACS codes, knowledge test reports, and practical exam reports for the purpose of ongoing improvement and collaboration between training and testing and to support emerging technologies.
- PTS to ACS Prioritization
 - Establishing sub-groups of volunteers to work through list
 - Mechanic ACS subgroup to be established and begin work

Training Standardization Working Group Status Report to the Aviation Rulemaking Advisory Committee



December 14, 2023

MEMBERS of Training Standardization Working Group

Thomas	Benvenuto	Solairus Aviation
Stephen	Bragg	Executive Jet Management
Greg	Brown	Helicopter Association International
Doug	Carr	National Business Aviation Association
Gene	Copeland**	Jet Aviation
Jon	Dodd	Coalition of Airline Pilots Associations
Aimee	Hein	CAE, Inc.
Jens	Hennig	General Aviation Manufacturers Association
Brian	Koester*	National Business Aviation Association
Todd	Lisak	Air Line Pilots Association
Steve	Maloney	Sun Air Jets
Brian	Neuhoff	Airbus Helicopters
Fabricio	Oliveira de Toledo	Embraer
Janine	Schwahn	Summit Aviation, Inc.
Brian	Small	FlightSafety International
Annmarie	Stasi	Northwell
Daniel	Von Bargaen	Pilot
Brian	Roggenbaum**	Textron

FAA Partners

Josh Tarkington

Paul Preidecker

Shannon Salinsky

James Sapoznik

Kristin Tullius

SUMMARY OF TASKING

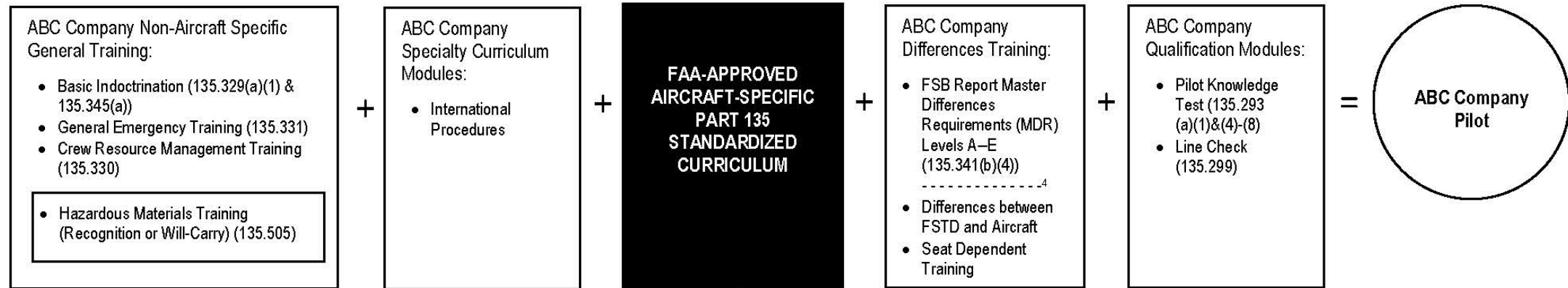
- 1) The Training Standardization Working Group (TSWG) will provide advice and recommendations to the ARAC on the most effective ways to standardize curricula provided by training centers. The group is tasked with the following:
- 2) Recommend a detailed master schedule for the development of part 135 standardized curricula for each aircraft or series of aircraft;
- 3) Develop and recommend a standardized curriculum to qualify training center instructors and evaluators (check pilots) to provide part 135 training, testing, and checking;
- 4) Develop and recommend part 135 standardized curricula for each aircraft or series of aircraft, including the maneuvers, procedures, and functions to be performed during training and checking;
- 5) Recommend continuous improvements to each part 135 standardized curriculum for a specific aircraft or series of aircraft; and
- 6) Develop reports containing recommendations for standardized curricula and results of the tasks listed here. The group should review any relevant materials to assist in achieving their objective, including FAA Advisory Circular 142-1,2 Standardized Curricula Delivered by Part 142 Training Centers.

SCHEDULE

- ✓ June 2021 – Deadline for submitting initial recommendation report including the proposed master schedule for standardized curriculum development to ARAC. The deadline to submit the interim report to the FAA is June 30, 2021.
- ✓ December 2021 – Deadline for submitting the addendum recommendation report, including a standardized curriculum to qualify training center instructors and check pilots to provide part 135 training, testing, and checking to ARAC. The deadline to submit the interim report to the FAA is December 31, 2021.
- The Training Standardization Working Group may submit ad hoc recommendation reports, including continuous improvements, to standardized curricula, via ARAC to the FAA for review and consideration at any time.
- The voting members of the TSWG meet quarterly

STATUS OF TASKING

- Tasking 1 (schedule) and 2 (instructor curriculum) are complete.
 - The FAA is making revisions to the instructor curriculum
- Anticipate recommendations:
- September 2023:
 - Hawker 800
 - Citation Excel
- June 2023:
 - King Air 300
 - Challenger 300



What does the Aircraft-Specific Part 135 Standardized Curriculum *portion* include (what's in the box—which curriculum segments are inside the box)?

Aircraft-Specific Part 135 Standardized Curriculum:

(Note: Aircraft Ground Training & Flight Training Segments under current Definitions.)¹

- Aircraft-Specific Ground Training/Aircraft Systems (135.345(b))
- Flight Training (135.347)²
- SOPs
- Profiles (Maneuvers) (135.327(b)(3))
- Checklists (OEM or developed by SMEs)
- Aircraft-Specific Qualification Modules (Testing/Checking)³
 - Pilot Testing: 135.293(a)(2)&(3)
 - Proficiency Check: 135.293(b)
 - Instrument Proficiency Check: 135.297

- Instructors/Check Airman (Evaluators) qualified by the 142 Training Center in accordance with 135.337 through 135.340 to deliver training, testing & checking under Aircraft-Specific Part 135 Standardized Curriculum.

TSWG Aircraft Type Action Team Tasks:



Action Team:	Team Lead	Participants:

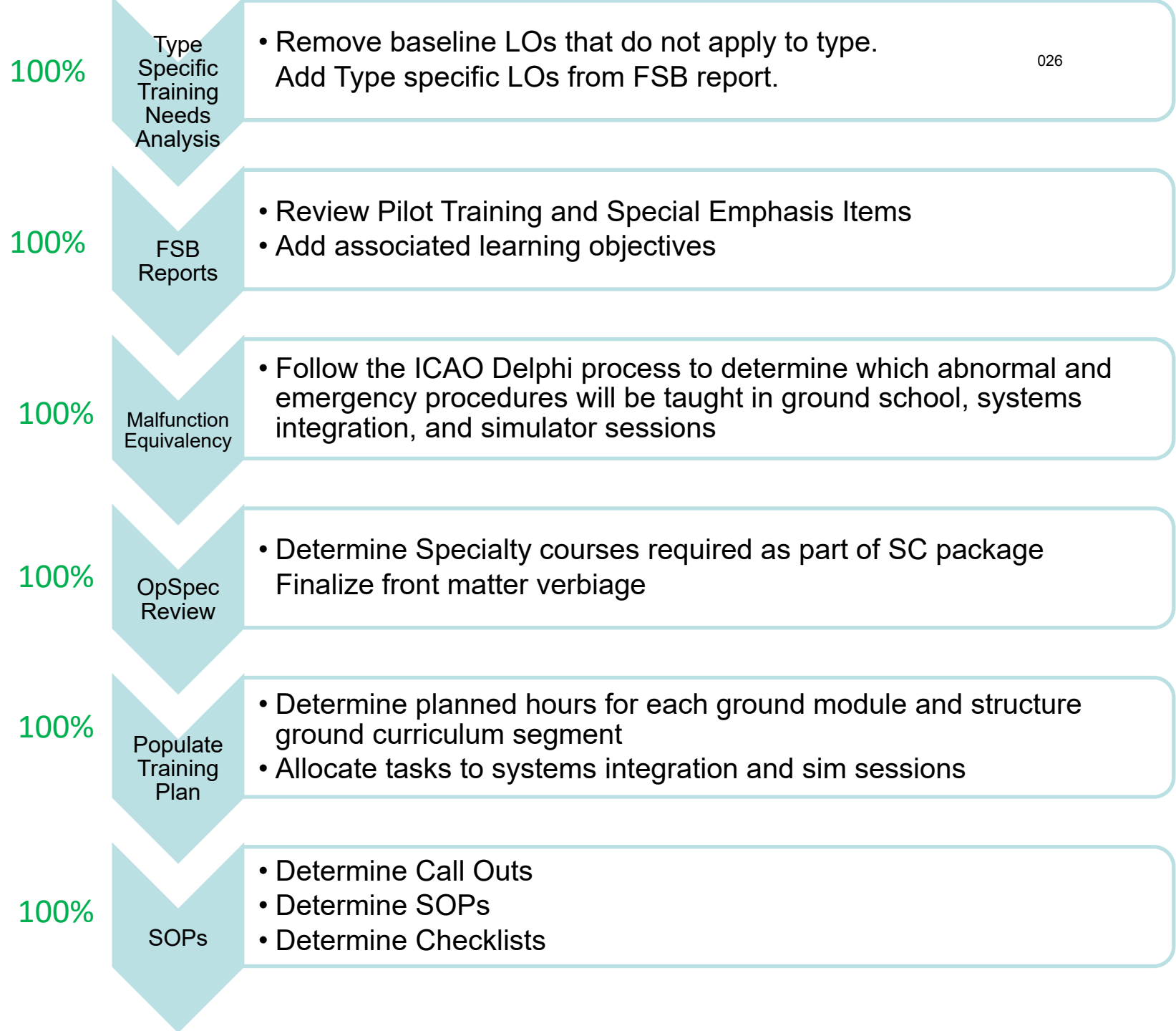
1. Conduct a review and analysis of the assigned tasks and any other related materials or documents.

025

 - Review TNA
 - Review FSBR
 - Review relevant OpSpecs/MELs
 - Review existing 142 training programs
2. Perform malfunction equivalency exercise.
3. Based on the templates and best practices established by the TSWG Develop and recommend the following curricula, including planned hours, for each aircraft fleet:
 - Initial New Hire,
 - Standard Recurrent,
 - Requalification,
 - Upgrade Recurrent, and
 - Adaptive Recurrent Training.
4. Each Type Specific Action Team will develop the following based on the templates and best practices established by the TSWG, to be used throughout the standardized training program and during normal operations:
 - SOPs
 - Call outs
 - Checklists
5. Draft and submit the recommendation report based on the assigned tasks.
6. Present the recommendation report at the TSWG meeting.
7. Provide continuous improvement for the standardized curriculum based on recommendations from the TSWG.



TSWG CE-560 XL & HS-125 Action Team Progress:



AREAS of ARAC CONSIDERATION

- New Action Teams:
 - BE-300 King Air Action Team
 - CL-30 Challenger 300 Series Action Team
- FAA is working to publish guidance for Adaptive Recurrent Training
- Reviewing methods to expedite the recommendation process
- Reviewing options to implement an SCP with new aircraft types
- Pending recommendation - Hawker curriculum technical correction

RECOMMENDATION(S)

Pending - Hawker curriculum technical correction

§ 65.101 Repairman Certificate Portability
Working Group
Status Report to the
Aviation Rulemaking Advisory Committee

Ric Peri

Working Group Chair

Dec 14, 2023

MEMBERS of Repairman Portability WG

- Working Group membership:
 - Ric Peri – Aircraft Electronics Association (Chair)
 - Sarah MacLeod – Aeronautical Repair Station Association
 - Jeff King – Duncan Aviation
 - Ben Wigton – Garmin International
 - Martin Segraves – Texas State Technical College **
 - David Downen -- Aviation Technical Services
 - Fred Dyen – Blue Ridge Community College **
- FAA participants:
 - Bryan Davis – AFS-350

The Task:

- The Repairman Certificate Portability Working Group will provide advice and recommendations to ARAC on the most effective ways to allow a repairman certificate issued under § 65.101 to be more portable from one employing certificate holder to another.
- The Working Group will review all relevant materials to assist in achieving their objective.

Schedule:

- This tasking notice requires two reports.
 - The preliminary report is due to the FAA no later than 12 months after the first working group meeting.
(Completed)
 - The final recommendation report is due to the FAA no later than 12 months after ARAC forwards the preliminary report to the FAA.
On target for 3rd Qtr 2024.

Meeting Schedule:

- Through completion of the task:
 - Bi-monthly – Virtual
 - Bi-monthly – face to face.

Questions?

Transport Aircraft and Engines Subcommittee Status Report to the Aviation Rulemaking Advisory Committee

Keith R. Morgan
Subcommittee Chair

14 Dec 2023

Members of the Transport Aircraft and Engines Subcommittee

Pratt & Whitney

ALPA

A4A

Airbus

Boeing

GAMA

Embraer

SRCA

FAA

EASA

TCCA

TAE Meeting Schedule

- 2023 Meetings
 - January 24
 - April 25 (face-to-face Seattle)
 - August TBD
 - October 24 (face-to-face Washington DC)
- 2024 Meetings
 - January 23
 - April 23 (face-to-face Seattle)
 - July 23
 - October 22 (face-to-face Washington DC)

Active Working Groups

- Flight Test Harmonization (FTHWG)
- Engine Ice Crystal Icing (ICIWG)
- Engine Propulsion Integration (EPIWG)

Look Ahead Report Submittal Schedule to ARAC

June 2024

- FTHWG Landing Distance for Abnormal Configurations
- FTHWG Reduced/Derated Thrust Takeoff Procedures

Flight Test Harmonization Working Group Status Report to the Transport Aircraft and Engines Subcommittee of the Aviation Rulemaking Advisory Committee

Brian P. Lee, Boeing
Laurent Capra, Airbus
Working Group Co-Chairs

24 October, 2023

MEMBERS of

Flight Test Harmonization Working Group Phase 4

Authorities	OEM's			Observers
FAA Joe Prickett Troy Brown (sponsor)	Airbus Philippe Genissel + SME's	Embraer Murilo Ribeiro + SME's	ATR Matthieu Ollivier Jean-Pierre Marre Thierry Pauliard +SME's	JCAB (Japan) Shinsuke Yamauchi
				CAAI (Israel) Yshmael Bettoun
EASA Matthias Schmidt Lorenzo Prieto Saiz	Boeing Brian Lee (Acting) Ryan Westbrook + SME's	Gulfstream Mike Watson +SME's	Airbus Canada Dimitri Cuesta +SME's	Norwegian Airlines John Lande
				Operations SME David Anvid
Transport Canada Lee Fasken	Bombardier Tony Spinelli +SME's	Textron Kurt Laurie +SME's	DeHavilland Canada Eric Herrmann +SME's	Centre d'Essais en Vol (CEV) Matthieu Buisson
				Operators
ANAC (Brazil) Marcos Carvalho	Dassault Philippe Eichel +SME's			ALPA John Cinnamon Brandon Miller

Status of Working Group Activities

- Back in step
 - Quarterly face-to-face meeting (two in Europe, two in North America)
 - Weekly scheduled telecons
- Additional working meetings
 - Subteams of FAME are meeting regularly (IN ADDITION) in support of the larger group
 - Effects of Environmental Factors
 - Flight Envelope for assessing failures

STATUS OF TASKING

- Dry Runway braking recommendations were accepted by ARAC in September
- Work is continuing on 4 topics:
 - FAME (how to deal with failures affecting Handling Qualities)
 - Narrow Runway Certification: Expect interim report to ARAC in March
 - Reduced/Derated Thrust Takeoff Procedures (Discussions have begun)
 - Landing Distance for **Abnormal** Configurations (Discussions have begun)
- ASHWG:
 - Low Energy Alerting
 - Proposal for no action: the two reports are not incompatible, Voting via e-mail
- Leadership planning for Phase 5 tasking

Phase 4 FTHWG Topic Technical Status (1 of 2)

- Topic #16 Failure Assessment Methodology & Evaluation (FAME)
 - Now fully engaged (including good interaction with System Safety SME's) making progress
 - EXCEPT: EASA has withdrawn, mostly, sort of, for a while... (more on this later)
 - FAA's guidance has been to press on anyway, which is what we are doing, but see late news, later
 - 2 sub-teams chartered and meeting regularly
 - Recommend Consistent Flight Envelope for failure evaluations
 - Recommend Consistent Environmental Conditions for failure evaluations
 - Interactions with CATA regarding 25.672: Questions have gone both directions, on-going
 - Team expects to not finish by June, 2024, propose to carry into Phase 5. Team wants this to be done right
- Topic # 21 Narrow runway operations
 - Team has converged on the definition a “baseline” runway, and the “regulatory hook” for declaration of runway width
 - Next task: mitigating the risks of operating on “narrower than baseline” runways
 - Progress has stopped due to lack of Systems Safety support from TCCA and EASA
 - Proposal: document work in interim report until all disciplines can provide support
 - Draft Interim report has begun

Phase 4 FTHWG Topic Technical Status (2 of 2)

- Topic # 22 Landing in Abnormal Configurations has begun
 - Progressing on schedule
 - Team anticipates
 - TAE in April, 2024
 - ARAC in June, 2024
- Topic # 26 Derate Thrust Procedures has begun
 - Controversy on the horizon
 - Despite currently requested by some authorities, should throttle push after engine failure with derate (and with adjustment of minimum control speeds), be required to be demonstrated in a future harmonized Flight regulation when it constitutes a violation of an AFM procedure
 - Additional analyses under way by OEM's
 - Team is targeting
 - TAE in April, 2024
 - ARAC in June, 2024

Phase 5 Planning

- FTHWG leadership (Co-Chairs and FAA sponsors) has begun planning for Phase 5 (so as to begin work in June, 2024)
- Topics under discussion (Realistically, 6 topics for 30 months):
 - From Phase 4
 - FAME
 - Narrow Runway (if Authorities' Safety organizations can support)
 - Topics left over from Phase 1 list
 - Additional topics proposed by FAA
 - Additional topics emerging

AREAS for ARAC CONSIDERATION

- EASA is encountering budgetary challenges
 - Limits the specialists travel (and we think their ability to spend time):
 - They did send a pilot representative to Toulouse to support the EASA voting member, and we provided “extra catch-up” meetings for them, which went very well
 - Late breaking news from EASA: They will send a pilot to the Washington DC meeting in December, and will consider (but not promise, yet) the Safety representative
 - All of this re-enforces the notion that EASA are genuinely interested in progressing the topics, despite being burdened with organizational financial constraints. EASA are demonstrating a willingness to help.
- More recently, TCCA System Safety specialists report a shortage of bandwidth to support (specifically for Narrow Runway)— our understanding is not so much budget but resources
- We would like to continue to encourage Authorities to support this activity across necessary disciplines (as other members are)

Ice Crystal Icing Working Group Status Report Transport Aircraft and Engines Subcommittee

Melissa Bravin

Allan van de Wall

Working Group Co-Chairs

24 October 2023

ICI Working Group Membership

Member Name	Organization	Role
Philip Haberlen	(FAA-ANE Standards) <u>FAA Representative</u>	FAA Representative
Melissa Bravin	Boeing Commercial Airplanes	WG Co-Chair – Airplane – P
Allan van de Wall	GE Aviation	WG Co-Chair – Engine – P
Aaron Cusher	Collins	Other – P
Adam Malone	Boeing	Consultant
Alberto Ramon	FAA	Non-voting role
Ashlie Flegel	NASA	Consultant
Bob Hettman	FAA	Non-voting role
Dayne Olmstead	Air Line Pilots Association	Other – P
Daijiro Kawakami	JCAB	Non-voting role
Dan Fuleki	National Research Council Canada	Consultant
David Dischinger	Honeywell	Engine – P
David Johns	TCCA-probes	Non-voting role
Doug Bryant	FAA	Non-voting role
Eric Duvivier	EASA	Non-voting role
Eric Fleurent-Wilson	TCCA-engines	Non-voting role
Fausto Enokibara	ANAC	Non-voting role
Jeanne Mason	FAA	Consultant
Jim Loebig	Rolls-Royce	Engine – P

Member Name	Organization	Role
John Fisher	FAA	Non-voting role
Jon Saint-Jacques	A4A/Atlas Air	Other – P
Josh Larson	Air Line Pilots Association	Other - P
Julien Delanoy	EASA	Non-voting role
Jun Izumi	JCAB	Non-voting role
Keith Morgan	Pratt & Whitney	ARAC Representative
Keith Wegehaupt	Honeywell	Engine – P
Mauricio Caio Rosin	TCCA	Non-voting role
Philip Chow	FAA	Consultant
Pierre-Emmanuel Arnaud	Airbus	Airplane – P
Rajeev Atluri	AeroSonic	Other - P
Roberto Marrano	Pratt & Whitney Canada	Engine – P
Roxanne Bochar	Pratt & Whitney	Engine – P
Shengfang Liao	Pratt & Whitney East Hartford	Engine – P
Shoichi Yamasaki	JCAB	Non-voting role
Takuya Mikami	JCAB	Non-voting role
Terry Tritz	Boeing	Consultant
Tom Dwier	Textron Aviation	Airplane – P
Tom Ratvasky	NASA	Consultant
Walter Strapp	Met Analytics Inc.	Consultant

Tasking Summary

No Change

- The ICIWG will provide advice and recommendations to the ARAC through the TAE Subcommittee on Appendix D to Part 33, and harmonization of §33.68 *Induction System Icing* requirements as follows:
 1. Evaluate recent ICI environment data obtained from both government and industry to determine whether flight testing data supports the existing Appendix D envelope.
 2. Evaluate the results carried out in Task 1 and recommend changes to the existing Appendix D envelope, as required. Examine how compliance with §33.68(e) and §25.1093(b)(1) can be shown to demonstrate that at the airplane level, engine effects that could prevent the continued safe flight and landing of the airplane during encounters in ice crystal icing conditions would be extremely improbable (10^{-9}). If that cannot be shown, recommend changes to the text of §33.68 or §25.1093 (or a combination of both) that would provide the level of safety described by §25.1309(b)(1).
 3. Compare available service data on air data probes from both government and industry probes on Appendix D, including any changes proposed in Task 2. Determine whether engine or aircraft data probe responses warrant the use of a different environmental envelope from those proposed in Task 2, or to the existing Appendix D envelope.
 4. Evaluate the results from Task 3 and recommend ICI boundaries relevant to aircraft and engine air data probes. If the working group proposes a different envelope for aircraft and engine air data probes, recommend if these should be included in the existing Appendix D, or create a new appendix to Part 33.
 5. Identify non-harmonized FAA or EASA ICI regulations or guidance. If the working group finds significant differences that impact safety, propose changes to increase harmonization that may also include icing environments other than Appendix D as a secondary objective.
 6. Recommend changes to the Advisory Circular AC20-147a, *Turbojet, Turboprop, Turboshift and Turbofan Engine Induction System Icing and Ice Ingestion*, based on Task 1 through 5 results.
 7. Assist the FAA in determining the initial qualitative and quantitative costs, and benefits that may result from the working group's recommendations.
 8. Develop a recommendations report containing the results of tasks 1 through 6. The report should document both majority and dissenting positions on the findings, the rationale for each position, and reasons for disagreement.

2023 Schedule

- ✓ Held F2F meeting 19-21 April @ Textron, Wichita, KS
- ✓ 19-21 September 2023 F2F meeting @ Boeing, Washington D.C.
- ✓ 19 October telecon
- 16 November telecon
- 6-8 February 2024 F2F meeting Honeywell, Phoenix, AZ

STATUS OF TASKING – 1 / 2

1. **COMPLETE** - Evaluate recent ICI environment data obtained from both government and industry to determine whether flight testing data supports the existing Appendix D envelope.
2. **IN-WORK** - Evaluate the results carried out in Task 1 and recommend changes to the existing Appendix D envelope, as required.
 - a) **Joint Probability Study IN-WORK** - Examine how compliance with §33.68(e) and §25.1093(b)(1) can be shown to demonstrate that at the airplane level, engine effects that could prevent the continued safe flight and landing of the airplane during encounters in ice crystal icing conditions would be extremely improbable (10^{-9}). If that cannot be shown, recommend changes to the text of §33.68 or §25.1093 (or a combination of both) that would provide the level of safety described by §25.1309(b)(1).
3. **COMPLETE** - Compare available service data on air data probes from both government and industry probes on Appendix D, including any changes proposed in Task 2. Determine whether engine or aircraft data probe responses warrant the use of a different environmental envelope from those proposed in Task 2, or to the existing Appendix D envelope.
4. **COMPLETE** - Evaluate the results from Task 3 and recommend ICI boundaries relevant to aircraft and engine air data probes. If the working group proposes a different envelope for aircraft and engine air data probes, recommend if these should be included in the existing Appendix D, or create a new appendix to Part 33

WG UPDATES

- Cumulative Mass Distribution (Particle Size Distribution)
 - Added in -20 C interpolation line (flight campaign data not collected at specific interval)
 - Extrapolations to -90 C will be provided for probe applicants
 - Engine companies recommend holding last value of -50 C
- Joint Probability Study:
 - FAA contract in work with NASA Langley - possibly complete later in 2023?
 - Current prediction is that joint probability study projected to complete in 2025?
 - Boeing continuing with MCS bucket support, and Monte Carlo support when ready

STATUS OF TASKING – 2 / 2

5. **COMPLETE -** Identify non-harmonized FAA or EASA ICI regulations or guidance. If the working group finds significant differences that impact safety, propose changes to increase harmonization that may also include icing environments other than Appendix D as a secondary objective.
6. **COMPLETE -** Recommend changes to the Advisory Circular AC20-147a, Turbojet, Turboprop, Turboshaft and Turbofan Engine Induction System Icing and Ice Ingestion, based on Task 1 through 5 results.
7. **IN-WORK (Economic study complete, summary report assigned to Jim Loebig (RR)) -** Assist the FAA in determining the initial qualitative and quantitative costs, and benefits that may result from the working group's recommendations.
8. **FINAL REPORT IN-WORK (FAA agreed that no interim report was necessary) -** Develop a recommendations report containing the results of tasks 1 through 6. The report should document both majority and dissenting positions on the findings, the rationale for each position, and reasons for disagreement.

AREAS of ARAC CONSIDERATION

- None

Engine Propulsion Integration Working Group Status

21 September 2023

Membership

- Solicitation period ended August 11, 2023
- Nominations from most of the major engine and aircraft OEMs

Next Steps

- finalize nominations and get through the DOT approval process
- Co-chairs selected
 - Melissa Bravin – Boeing
 - Douglas Beneteau - GE
- Draft work plan complete
- First meeting January 2024