AVIATION RULEMAKING ADVISORY COMMITTEE

RECORD OF MEETING

| MEETING DATE: | September 14, 2017 |
|-------------------------|--|
| MEETING TIME: | 1:00 pm |
| LOCATION: | Federal Aviation Administration 800 Independence Avenue SW. 8th Floor Conference Room Washington, DC 20591 |
| PUBLIC ANNOUNCEMENT: | The Federal Aviation Administration (FAA) told the public of this Aviation Rulemaking Advisory Committee (ARAC) meeting in a Federal Register notice published August 18, 2017 (82 FR 39489). |
| ATTENDEES: | Committee Members |
| Yvette Rose | Cargo Airline Association (CAA) ARAC Vice Chair |
| Lirio Liu | Federal Aviation Administration (FAA) Office of Rulemaking, ARM–1 Designated Federal Officer (DFO) |
| Lorelei Peter | Federal Aviation Administration (FAA) |
| Todd Sigler | The Boeing Company (Boeing) |
| Chad Balentine | Air Line Pilots Association, International (ALPA) |
| Damon Cox* | Airline Dispatchers Federation (ADF) |
| Ambrose Clay | National Organization to Insure a Sound Controlled Environment (NOISE) |
| Gail Dunham | National Air Disaster Foundation (NADF) |
| David Oord | Aircraft Owners and Pilots Association (AOPA) |

| Phil Poynor | National Association of Flight Instructors (NAFI) |
|--------------------|--|
| Jennifer Sunderman | Regional Airline Association (RAA) |
| Paul Hudson | FlyersRights.org |
| Michelle Betcher | Airline Dispatchers Federation (ADF) |
| Robert Ireland | Airlines for America (A4A) |
| George Novak | Aerospace Industries Association of America (AIA) |
| Walt Desrosier | General Aviation Manufacturers Association (GAMA) |
| David Supplee* | International Association of Machinists and Aerospace Workers (IAMAW) |
| Matt Callan | Helicopters Association International (HAI) |
| Ric Peri* | Aircraft Electronics Association (AEA) |
| Sarah MacLeod | Aeronautical Repair Station Association (ARSA) |
| Chris Witkowski | Association of Flight Attendants (AFA) |
| George Paul | National Air Carrier Association (NACA) |
| Stephanie Flori* | Aerospace and Defense Industries Association of Europe (ASD) |
| Melissa Sabatine* | Airports Council International, N.A. (ACI, N.A.) |
| | Attendees |
| Kerri Smith | Federal Aviation Administration (FAA) Office of Rulemaking, ARM-02 |
| Linda Lane | Joint Venture Solutions, LLC. (JVS) |
| Brian Zane | Federal Aviation Administration (FAA) Office of Rulemaking |
| Brent Hart | Federal Aviation Administration (FAA) |

| Thuy Cooper | Federal Aviation Administration (FAA) |
|--------------------|---|
| Jim Crotty | Federal Aviation Administration (FAA) |
| Larry West | Federal Aviation Administration (FAA) |
| Valerie Smith* | Federal Aviation Administration (FAA) |
| Bob Ganley* | Federal Aviation Administration (FAA) |
| Alan Drum* | Federal Aviation Administration (FAA) |
| Larry West | Federal Aviation Administration (FAA) |
| Van Kerns | Federal Aviation Administration (FAA) |
| Martin Crane | Federal Aviation Administration (FAA) |
| Brandon Robert | Federal Aviation Administration (FAA) Office of Rulemaking |
| Victor Wicklund* | Federal Aviation Administration (FAA) |
| Scott Gore | Federal Aviation Administration (FAA) Government Affairs Office |
| Rikki Gardonio | Air Line Pilots Association, International (ALPA) |
| Chris Oswald* | |
| Leisha Bell* | Flight Standards |
| Susan Parsons | Flight Standards |
| Andrew Applebaum | FlyersRights.org |
| Chris Lombardi | FlyersRights.org |
| Anton Van Seventer | FlerysRights.org |
| Stephen Grota* | Federal Aviation Administration (FAA) Aircraft Maintenance Division, AFS-330 |
| Mary Schooley* | Federal Aviation Administration (FAA) |
| Michael Smith* | Bell Helicopter |
| Brian Lee* | The Boeing Company (Boeing) |

| Transport Canada (TCCA) |
|-------------------------|
| United Postal Service |
| TAE Chair |
| Politico |
| Injury Analysis LLC |
| Associated Press (AP) |
| AFA |
| The Buffalo News |
| |

*Attended via teleconference.

WELCOME AND INTRODUCTION

Ms. Yvette Rose, Aviation Rulemaking Advisory Committee (ARAC) Vice Chair, called the meeting to order at 1:00 PM and thanked the ARAC members and the public for attending. She invited the attendees to introduce themselves.

Ms. Lirio Liu, Federal Aviation Administration (FAA) Designated Federal Officer (DFO), read the required Federal Advisory Committee Act (FACA), Title 5, United States Code (5 U.S.C.); Appendix 2 (2007) statement. Ms. Liu confirmed that it is a public meeting, and that the meeting materials presented are public information (available on the ARAC website), including any materials distributed for presentation during the meeting.

Ratification of Minutes

Ms. Rose asked for any revisions or amendments to the minutes from the April 20, 2017, meeting. Mr. Chris Witkowski (AFA) advised that his name had the incorrect organization on the attendees list. There was a motion to approve and there was a unanimous "in-favor" for approval of the minutes.

Ms. Rose asked for any revisions or amendments to the minutes from the June 8, 2017 meeting. There was a motion to approve and there was a unanimous "in-favor" for approval of the minutes.

New Taskings

Ms. Rose stated some of the new taskings have been in the works for quite some time. Mr. Todd Sigler asked how the current 2-for-1 activity played into the decision of moving forward with the four new taskings. Ms. Liu responded that the FAA previously approved the taskings and intended to task the ARAC at previous meetings. Ms. Liu acknowledged the FAA considered the 2-for-1 activity when it decided to move forward with the new taskings. She noted the FAA's thought process was for the working groups to arrive at other mitigations and solutions to enhance safety that may not require rulemaking. Ms. Liu also indicated there will be more taskings to come to the ARAC based on what the FAA plans to do with rulemaking.

Avionics Systems Harmonization Working Group

Ms. Rose asked if there were comments regarding the proposed tasking for the Avionics System Harmonization Working Group (ASHWG).

Mr. Sigler commented that it was his understanding the Flight Test Harmonization Working Group would be working in concert with the ASHWG as both Working Groups reside under the Transport and Engine (TAE) Subcommittee. Mr. Sigler advised he would expect to see an update regarding the coordination between the two groups at a future ARAC meeting. Mr. Sigler acknowledged this could be difficult based with the alignment of TAE's meeting schedule with the ARAC meetings. Ms. Sarah MacLeod asked whether the tasking schedules start when the notice is published in the Federal Register or upon formation of the working group. She understood that the schedule starts once the working group has formed, which was confirmed. Mr. Walter Desrosier noted the ASHWG is an existing working group. Mr. Victor Wicklund clarified that the ASHWG is actually being reestablished as the working group disbanded after completing its previous work.

Ms. Liu stated the ARAC has the taskings and the intent is for the ARAC to approve the content of the tasking with an understanding the timing will become consistent on the wording of the tasking. Ms. Liu added the FAA would include a statement in the Federal Register notice to address the handling of proprietary information in working groups.

Ms. Rose opened the floor for a motion to accept the tasking for the ASHWG. ARAC voted to accept the tasking.

Ice Crystal Icing Working Group

Ms. Rose asked if there were comments or questions regarding the proposed tasking for the Ice Crystal Icing Working Group (ICIWG). Mr. Sigler questioned why the ICIWG would last for 30 months if the recommendation report is due 24 months from the publication date in the Federal Register. He stated this did not seem to be something he has seen before and he was curious of the reason. Ms. Liu responded this is intentional as a means of providing more standardized wording within the taskings. In addition, it allows the ARAC to go back to the working group with questions and additional tasking without having to do a new tasking. Ms. Rose opened the floor for a motion to accept the tasking for the ICIWG. ARAC voted to accept the tasking.

Part 145 Working Group

Ms. Rose asked if there were any comments or questions about the tasking. Ms. Liu identified there are typographical and editorial errors which will be corrected prior to publication.. Ms. Rose expressed concern that as drafted, the tasking is too broad, and she requested that ARAC members review the wording of the tasking to ensure it meets the intent. Ms. Rose wanted to ensure the the scope of the tasking, as written is what was intended. . Ms. MacLeod noted that the Working Group will be ensuring the alignment of agency and industry guidance materials with the regulations. As, Ms. MacLeod noted, the working group will try to align the safety assessment system with the guidance internally and externally. Ms. MacLeod believed that the proposed Part 145 Working Group would complete the tasking, even with the broad nature of the tasking.

Given the importance of ensuring the tasking is clear, Ms. MacLeod moved to table the tasking until the December ARAC meeting. This would allow ARAC members to review and provide comments. ARAC voted to table the tasking until the December 2017 meeting. Ms. Rose asked members to submit comments by September 29th.

Airman Certification System Working Group

Ms. Susan Parson addressed ARAC to discuss the Airman Certification System Working Group (ACSWG) and the request to expand the tasking. Ms. Parson explained the ACSWG has been tasked to revise and reform the aircraft certification system and its various elements, and was requesting to expand the scope. Ms. Parson requested the ARAC accept the tasking to expand the scope of the ACSWG to add the Sport Pilot and Recreational Pilot certificates in all categories. Ms. Rose asked about the projected timeline for the project. Ms. Parson stated the recommendation reports would be due 30 months after publication of the tasking in the Federal Register.

Ms. Rose opened the floor for a motion to accept the tasking for the ACSWG. ARAC voted to accept the tasking.

Status Reports (ARAC)

Rotorcraft Occupant Protection Working Group

Mr. Dennis Shanahan, the chair of the Rotorcraft Occupant Protection Working Group (ROPWG), provided an overview of the ROPWG's tasking and informed ARAC on the working group's progress. Since the last interim update, the ROPWG continued working on the fuel system crashworthiness as well as the crash resistant seat and structure (CRSS). Mr. Shanahan noted the ROPWG aims to complete its final report by early

2018. He noted there may be some complications to meet the deadline, which will be discussed at a later time. Mr. Shanahan stated while the ROPWG is focusing on §§ 27.952 and 29.952 (Fuel system crash resistance), it is also examining §§ 27.963/29.963 (Fuel tanks: general) and §§ 27.975/29.975 (Fuel tank vents). Mr. Shanahan noted the ROPWG believe these two additional items are integral to any discussion relating to crash resistant fuel systems. He further noted that when comparing fully compliant and partially compliant systems to non-compliant fuel systems, the full or partially compliant systems have a one percent thermal injury rate whereas the non-compliant systems have an eleven percent thermal injury rate.

With respect the interim report, Mr. Shanahan stated two different topics remained open. The ROPWG has reached some agreement on §§ 27.952(c) and (g) and §§ 29.952(c) and (g) (flexible fuel hoses and breakaway fittings).

Mr. Shanahan acknowledged difficulty with addressing Crash Resistant Seat and Structure (CRSS). Unlike fuel systems where data was available, there is a lack of data for CRSS. He noted rulemaking for the crashworthiness of helicopters would be severely inhibited by the lack of overall data. He further noted that it would be hard to determine how many injuries are occurring because of the type of seat as there is no report on spinal injuries, et cetera. The working group has approached CRSS with the assumption full compliance is a requirement and potentially downgraded based on a few different factors such as weight or difficulty that would make full compliance difficult to achieve. He also acknowledged the ROPWG is a little behind on CRSS because it focused on fuel system compliance for the interim report.

Mr. Shanahan noted the ROPWG is on track for completion by the January 25, 2018, deadline.

Rotorcraft Bird Strike Working Group

Mr. Michel Smith, the co-chair of the Rotorcraft Bird Strike Working Group (RBSWG), noted 94.2% of all rotorcraft operating in the U.S. are part 27 aircraft. Part 27 rotorcraft have nine or fewer occupants. Mr. Smith stated the RBSWG is reviewing all data in the National Wildlife Strike Database (NWSD) but is concentrating on the data from January 2009 to February 2016 since the reporting rate significantly increased and stabilized following two events early in 2009. These two events consisted of the only fatal rotorcraft attributed to bird strike and the US Airways Flight 1549 dubbed the "Miracle on the Hudson" event, both of which raised awareness of the bird strike problem. Prior to 1996 when 14 CFR § 29.631 bird strike airworthiness regulation became law, the average bird strike reports ran at an average rate of 14.5 per year. After 1996, the average rate nearly doubled to 30.4 strikes per year from 1996 to 2008. In 2009 the reporting rate increased to 127 reports and to 162 in 2010. The rate appears to have stabilized since 2011 with an average reporting rate of 223.2 strikes per year from 2011 through 2015.

Mr. Smith stated most (two-thirds) rotorcraft bird strike incidents occur while en-route away from an airport, whereas, with fixed wing aircraft, the majority of bird strike

incidents occur during takeoff and landing around the airport. The en-route phase is when an aircraft has its highest velocity (kinetic energy). Specifically, 85% of rotorcraft bird strike incidents occur in the three phases of en-route, approach and climb. He also advised that, for part 27 rotorcraft, 32% of bird strikes occur during the day and 43% occur during the night. This is opposite the findings for part 29 rotorcraft, where there are more incidents during the daytime (43%) than at night (29%). Mr. Smith noted the difference is likely the result of the different types of flight operations for parts 27 and 29 rotorcraft. While the use of part 27 rotorcraft includes emergency air transport and law enforcement, part 29 rotorcraft are heavily used in energy production with predominate use during the day.

When talking about the effectiveness of this rule, Mr. Smith said most bird strikes occur on the windshield with 40% to 47% of all rotorcraft bird strikes reported windshield strikes. He noted there is no statistical difference between parts 27 and 29 of where the bird strikes occur on the rotorcraft, noting that only 3%-4% occurred on the tail rotor or empennage. Of the strikes hitting the windshields, 30% to 34% penetrated the windshield. Of the currently operating part 29 fleet in the US, 22% are § 29.631compliant. There are 38 bird strike reports on rotorcraft meeting § 29.631 rotorcraft bird strike regulation, which is considered statistically to be a large sample. Of all the rotorcraft meeting the regulation, there have been exactly zero occurrences of bird strike windshield penetration in the past 21 years.

Mr. Smith stated aircraft speed can be a significant factor in bird strikes as birds can see rotorcraft as prey and will take evasive actions. However, a bird strike can occur if the birds do not see the rotorcraft or do not move quickly enough. The higher the speed, the increased likelihood of a bird strike. More than 3 out of 4 (77.1%) of bird strikes for which airspeed was reported occurred above 80 knots. When considering altitude, Mr. Smith noted that 93% of all bird strikes occur below 3500 feet AGL, and the presence of birds (i.e., threat) increases by 32% for each 1,000 ft. reduction in altitude. He stated research by the U.S. Department of Agriculture concluded that using full spectrum lighting during the day (and night) and a 2-Hz pulsing light in partly cloudy conditions provides early warning to some birds to prevent bird strikes. Mr. Smith noted that onboard-inflight radars might be a beneficial area for research to see if it would be a benefit to preventing bird strikes, however it is not something that can be recommended by RBSWG at this time. Finally, Mr. Smith noted that flight crew preflight planning could be improved may provide the most effective and immediate response to bird strike avoidance. The location of bird concentrations during seasonal migrations and the local bird nesting and roosting habitats, should be made available to the rotorcraft operator/pilot for preflight planning to minimize the potential for bird strikes. Air carriers and general aviation operators working with the FSDO Safety Programs and Flight Service Briefing should identify and publish the known locations and probability of bird concentrations. This information should be incorporated into alert bulletins, flight service notification to airmen (NOTAM), Information for Operators (InFO) per FAA Order 8000.9, and other systems presently used to inform flight crews of the hazards of bird concentrations.

Mr. Smith reported the RBSWG will submit its final report to ARAC within the next few weeks. Subsequent to Mr. Smith's presentation to the ARAC on September 21st, he emailed on October 19th that the RBSWG has re-worked the economic analysis of Task 8, correcting the valuation of benefits to account for only the reduced independent sets of newly type certified, newly manufactured and existing rotorcraft rather than the aggregated benefits from all three sets. The current plan is to submit the final report on or before November 14th, which is 30 days prior to the next ARAC Meeting in December.

Loadmaster Certification Working Group

Mr. Martin McKinney, the vice chair of the Loadmaster Certification Working Group (LCWG), stated the group recently met. Though not part of the LCWG's mandate, the group attended a symposium hosted by ALPA in mid-August. The LCWG felt attending the symposium would help to ensure that its recommendations do not conflict with regulations in other similar areas. The LCWG also reviewed the processes and functions that are performed during the movement of special cargo, which it subdivided into the special cargo loading analysis function (SCAF) and the special cargo loading supervisor. The special cargo loading analysis functions are the plans and development to ensure the load plan complies with all of the regulatory manuals requirements. The loading supervisor would execute that plan and ensure the plan is properly conducted.

Mr. McKinney noted that the LCWG unanimously agreed that the SCAF function, if certified in some form or process, would have a positive safety enhancement. The LCWG has also reviewed eight different options for certification and discussed what options would work. The working group used different scoring methodologies to make sure the logic is well organized and the conclusion is well supported. The LCWG reached consensus on one of the options, which it will release with the final report.

Airman Certification System Working Group

Mr. Oord, chair of the Airman Certification System Working Group (ACSWG), stated the ACSWG is currently focused on three standards; Instructor, Airline Transport Pilot (ATP), and Aviation Maintenance Technician (AMT). The group is in the final review stage of the instructor ACS with publication in 4th quarter of FY17. Second, the group is waiting for the FAA to complete its revision of the ATP standard, based on changes to the Private, Commercial, and Instrument rating. Third, the working group has completed the draft mechanic standard and a tabletop prototype is being developed.

Mr. Oord next discussed testing, with a new instrument knowledge exam supplement published, with working group feedback and recommendations incorporated. He advised the FAA continues to review test banks using an ACS Exam Review Board (AEB).

Under guidance, Mr. Oord noted the FAA is currently reviewing the working group's recommendations and submission for the AMT general and the new addition is on track for September. After reviewing the Aviation Instructors Handbook, the working group felt that it is primarily focused on pilot instructors, but should be relevant to mechanic

instructors as well. The AMT subgroup is reviewing the draft and will provide input with a new edition estimated for September, 2018.

Lastly, Mr. Oord stated the ACSWG will meet in December 2017 and will work on dates for 2018.

Transport and Engine Subcommittee (TAE) Status

Flight Test Harmonization Working Group

Mr. Keith Morgan, chair of the Transport and Engine (TAE) Subcommittee, reported that phase two of the Flight Test Harmonization Working Group (FTHWG) has been completed and submitted to the TAE. Phase two covered ten items. The FTHWG has submitted the recommendation report to the ARAC for consideration.

Engine Harmonization Working Group

Mr. Morgan reported the Engine Harmonization Working Group's (EHWG) activities are complete, including submission of the report for review in July subsequently receiving TAE acceptance and submission to the Committee. Mr. Morgan stated the EHWG looked at the 150-hour endurance test to determine if there is a better alternative test than the current methodology. He noted today's designs do not lend themselves to the current methodology for running the test. The EHWG developed a series of tests providing the same or better level of safety than the current test.

Recommendation Reports

ARAC tabled the EHWG Engine Endurance Testing Requirements – Revision of Section 33.87 Final Report and FTHWG Transport Airplane Performance and Handling Characteristics, Phase 2 Final Report to the December 2017 meeting.

ARAC Input to Support Regulatory Reform of Aviation Regulations

Ms. Rose opened the discussion on the Regulatory Reform Initiative. She first thanked Todd Sigler for his commitment and leadership on this important task. She turned the meeting over to Mr. Sigler for an update.

Mr. Sigler noted ARAC accepted the Task at the April 20, 2017, meeting. ARAC discussed and accepted the initial report at the June 8, 2017, meeting. For the addendum report, ARAC dug deeper by providing quantitative data and cost-benefit analysis for each individual recommendation. Mr. Sigler also noted the ARAC did not have enough time to complete the last part of the tasking, which was to review the regulatory agenda and provide feedback for submission to the FAA.

Mr. Sigler stated the diversity of different regulations in the ARAC's submission is due to the diversity of the ARAC membership. Some of the regulations in the phase one

submission are complex, so the ARAC held several teleconferences as a venue for discussing the regulations in the submission. He noted the initial report included more regulations and, over time, the ARAC members eliminated many, leaving 54 identified in the addendum report. Mr. Sigler noted the regulations in the submission cover a variety of things from aircraft design and build, certifications and training, operation, as well as airports and weather. He noted the dissents, which are included in the addendum report. Some proposals included referrals to TAE to form new working groups to develop ways to repeal, modify, or replace the regulation.

Mr. Ambrose Clay, of National Organization to Insure a Sound Controlled Environment (NOISE), noted that he submitted his proposal in order to encourage the FAA to expeditiously deal with the noise issue as part of NextGen.

Mr. Paul Hudson, of FlyersRights.org, stated he would vote for the recommendation report even though his organization did have some specific dissenting opinions that are in the report. Mr. Hudson also stated that voting for the report does not mean his organization feels good about all of the recommendations.

Ms. Gail Dunham, of National Air Disaster Foundation (NADF), stated her organization was against submitting the report because there is a recommendation to overturn an act of Congress. That legislation contributed to no aviation disasters over the last seven years. She also stated there has been a large amount of time and money developing many of the regulations that are being proposed for repeal, replace, or modification. Ms. Dunham noted the ARAC did not have an FAA representative or an FAA legal representative to assist with the tasking, which she felt would have been required by DOT order. Ms. Dunham highlighted that only 12 to 13 member organizations participated in the meetings; however, she believes the addendum report assumed consensus and 100% ARAC member support.

She stated that it wasn't to overturn regulations but to overturn an act of Congress and that that legislation contributed to no aviation disasters over the past seven years.

Mr. Chris Witkowski, of Association of Flight Attendants, stated he believes the report is a misrepresentation of the ARAC as a whole. He noted several of the organizations provide goods and services to the aviation industry and stand to gain from the deregulation being proposed. Many ARAC organizations representing crew, maintenance workers, passengers, et cetera, have many serious and prolific concerns about some of the regulations being put forward in the report.

Mr. George Novak, of Aerospace Industries Association of America (AIA), questioned if the inclusion of the dissenting opinions in the report would satisfy his concern. Mr. Witkowski stated he believes it does not and the report as drafted indicates the entire ARAC supports it. Mr. Witkowski also stated ARAC should not accept and submit the report. He also suggested each recommended regulation should list the name of the organization(s) that proposed it.

Mr. Witkowski motioned to modify the recommendation report to identify the organization(s) making each proposal, and the report be submitted as a collection of organizations making those recommendations rather than by ARAC. Ms. Dunham seconded the motion. Mr. Bob Ireland, of Airlines for America (A4A), indicated he opposed the motion because it would give the impression that only one organization supported the submission of a regulation. However, he noted multiple organizations may have agreed on a submission for consideration in some cases. Mr. Ireland stated it was offensive to characterize the intent of to be anything other than to continue the standards of safety. He noted the primary consideration with each recommendation was maintaining the current level of safety. Mr. Witkowski stated that it was inappropriate for ARAC to approve the report because it misrepresents the degree of opposition to many of the proposals. Mr. Ric Peri, of Aircraft Electronics Association (AEA), stated he was confused as to why there was an assumption there needs to be unanimous agreement on this current activity. He noted there has never been a requirement for ARAC to have unanimous agreement on anything and he appreciates there wasn't unanimous agreement on this current activity. He noted that he did not agree with all the proposals, but this did not mean he would not vote to accept the report.

Ms. Dunham requested to amend the motion to remove the fourth paragraph from the bottom of the cover letter as Mr. Sigler suggested. Mr. Witkowski did not accept the amendment

Ms. Rose called for a vote.

Mr. Witkowski made a motion that the report produced not be submitted as a product of ARAC. Ms. Dunham seconded the motion.

| Organization | Industry Segment | Name | Vote |
|---|------------------------------------|------------------|---------|
| | | | |
| Boeing Commercial Airplane Group | Manufacturers | Todd Sigler | No |
| | | | |
| Airlines For America (A4A) | Operators | Robert Ireland | No |
| | | | |
| Airline Dispatchers Federation (ADF) | Other Crew | Michelle Betcher | Abstain |
| | | | |
| Aircraft Electronics Association (AEA) | Equipment and Avionics Provider | Ric Peri | No |
| | | | |
| Association of Flight Attendants (AFA) | Other Crew | Chris Witkowski | Yes |

The motioned failed 14-4. There was one abstention.

| Aerospace Industries Association (AIA) | Manufacturers | George Novak | No |
|---|---------------------------------|----------------|-----|
| Air Line Pilots Association (ALPA) | Pilot | Chad Balentine | Yes |
| Aircraft Owners and Pilots Association (AOPA) | Aircraft Owners | David Oord | No |
| Aeronautical Repair Station Association (ARSA) | Manufacturing | Sarah MacLeod | No |
| Aerospace & Defense Industries Association of Europe (ASD) | Manufacturing | Stephane Flori | No |
| Cargo Airline Association (CAA) | Operators | Yvette A. Rose | No |
| | | | |
| FlyersRights.org | Public Citizen and Passenger | Paul Hudson | No |
| | | | |
| Helicopter Association International (HAI) | Operators | Matt Callan | No |
| | | | |
| International Association of Machinist and Aerospace Workers (IAMAW) | Manufacturing | David Supplee | Yes |
| | | | |
| National Air Carrier Association (NACA) | Operators | George Paul | No |
| | | | |
| National Air Disaster Alliance/ Foundation (NADA/F) | Public Citizen and Passenger | Gail Dunham | Yes |
| | | | |
| National Association of Flight Instructors (NAFI) | Academia | Phil Poynor | No |
| | | | |

| National Organization to Insure a Sound-Control Environment (N.O.I.S.E) | Environment | Ambrose Clay | No |
|---|-------------|--------------------|----|
| | | | |
| Regional Airline Association (RAA) | Operator | Jennifer Sunderman | No |

After the motioned died, the ARAC continued to have an in-depth discussion on whether it should accept and submit the recommendation report to the FAA.

Much discussion, Mr. Novak made a motion to accept the report and submit it to the FAA with the deletion of the following paragraph from the cover letter:

"The detail in the proposals vary given the time permitted to complete the second part of the tasking. ARAC accepts that some proposals contain greater detail and supporting data, but ARAC believes each proposal is a valid opportunity for the FAA to pursue and does not meet the intent of the tasking and associated Executive Orders. ARAC supports any FAA decision to use existing subcommittees and working groups, and establishing others if needed, to further explore any of the proposals contained within the report."

Mr. Ireland seconded the motion.

The motioned passed 14-4. There was one abstention.

| Organization | Industry Segment | Name | Vote |
|---|------------------------------------|------------------|---------------|
| | | | |
| Boeing Commercial Airplane Group | Manufacturers | Todd Sigler | Yes |
| | | | |
| Airlines For America (A4A) | Operators | Robert Ireland | Yes |
| | | | |
| Airline Dispatchers Federation (ADF) | Other Crew | Michelle Betcher | Abstai ned |
| | | | |
| Aircraft Electronics Association (AEA) | Equipment and Avionics Provider | Ric Peri | Yes |
| | | | |
| Association of Flight Attendants (AFA) | Other Crew | Chris Witkowski | No |
| | | | |

| Aerospace Industries Association (AIA) | Manufacturers | George Novak | Yes |
|---|---------------------------------|----------------|-----|
| Air Line Pilots Association (ALPA) | Pilot | Chad Balentine | No |
| Aircraft Owners and Pilots Association (AOPA) | Aircraft Owners | David Oord | Yes |
| Aeronautical Repair Station Association (ARSA) | Manufacturing | Sarah MacLeod | Yes |
| | | | |
| Aerospace & Defense Industries Association of Europe (ASD) | Manufacturing | Stephane Flori | Yes |
| Cargo Airline Association (CAA) | Operators | Yvette A. Rose | Yes |
| | | | |
| FlyersRights.org | Public Citizen and Passenger | Paul Hudson | Yes |
| | | | |
| Helicopter Association International (HAI) | Operators | Matt Callan | Yes |
| | | | |
| International Association of Machinist and Aerospace Workers (IAMAW) | Manufacturing | David Supplee | No |
| | | | |
| National Air Carrier Association (NACA) | Operators | George Paul | Yes |
| | | | |
| National Air Disaster Alliance/ Foundation (NADA/F) | Public Citizen and Passenger | Gail Dunham | No |
| | | | |
| National Association of Flight Instructors (NAFI) | Academia | Phil Poynor | Yes |
| | | | |

| National Organization to Insure a Sound-Control Environment (N.O.I.S.E) | Environment | Ambrose Clay | Yes |
|---|-------------|--------------------|-----|
| | | | |
| Regional Airline Association (RAA) | Operator | Jennifer Sunderman | Yes |

Other Business

Ms. Liu stated the FAA appreciates the work and dedication each member of the ARAC put forth with each of their responsibilities. Ms. Liu also stated the ARAC charter expires in September 2018 and the FAA has starting work on the charter extension. She also noted the next meeting is December 14, 2017.

CONCLUSION

Ms. Rose thanked the committee members for their attendance and participation.

ADJOURNMENT

Ms. Rose adjourned the meeting at 3:54 pm.

Approved by: _____

Dated: _____

Ratified on: _____