

Aviation Rulemaking Advisory Committee (ARAC)
Transport Airplane and Engine Issues

Meeting Minutes

DATE: September 12-13, 2000
TIME: 8:30 a.m.
LOCATION: Boeing – Building 10-16
535 Garden Avenue
Renton, Washington

Call to Order/Administrative Reporting

Craig Bolt, Assistant Chair, called the meeting to order and welcomed the attendees who in turn introduced themselves. (See attached sign-in sheet.) John McGraw, Acting Assistant Executive Director, read the required statement for governing the conduct of the meeting. Mr. Bolt reviewed the agenda (handout 1), and members approved the May ad hoc meeting minutes. The June meeting minutes were circulated for review. He distributed the Items of Interest Since June 2000, and Open Taskings Chart (handouts 2 and 3).

Members then reviewed the status of Actions Items from the June 27-28 meeting, noting the following actions:

Item	Action
1	Completed
2	Tasking published in <i>Federal Register</i> ; working group being established
3	Ongoing; Kris Carpenter to incorporate changes;
4-7	Completed
8	Ongoing; ANM intends to put requirement in rulemaking project record (rpr).
9, 10	Completed
11	See discussion in Powerplant Installation HWG section
12	Completed
13	FAA expects to distribute by end of September
14	Comment period extended to close first week of September
15	FAA and JAA were required to put together draft; expect to have by December TAE meeting
16	Completed
17	Completed; tasking process has been started
18	Expect to have letter to working group next week
19, 20	Open
21	Completed
22	Mr. Bolt to send to issues group week of 9/18, with acceptance by mail
23	Tasking process started

Carryover from the March meeting:

Item	Action
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8	Coordination in place; expect to have completed by Dec TAE meeting
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FAA Report

- ◆ **Status of FAA Rulemaking Projects**—The rulemaking database projects was distributed electronically to members before the meeting.
- ◆ **Fast Track ARAC Update**--Ms. Carpenter distributed a fast track status report (handout 4). She reported that everything was being worked, and that some items have gone back to the working group for review. She indicated that ANM expects to accelerate the process after the beginning of the new fiscal year.
- ◆ **Development Additional to the Green Book**—Included in discussion of item 3 of June action items.
- ◆ **Comments on Proposed New Taskings**—Ms. Carpenter indicated that the FAA had come up with a number of proposed Terms of Reference since June. She provided the following updates:
 - 1--*Complex modifications (multiples STC's)*; rpr being reviewed.
 - 2--§ 25.1322/AC 25-11 rpr being drafted; ASHWG
 - 3--§ 25.608/25.683 (two taskings being developed; rpr being drafted; GSHWG
 - 4--Fuel Vent, part 25, and retrofit; rpr being reviewed
 - 5--§ 25.903d, rotor burst; received comments from industry
 - 6--§ 25.729, landing gear retraction, in FAA/JAA coordination
 - 7--Amendment 25-87, pressurization/temperature task; rpr is being drafted
 - 8--Air quality; comments being reviewed; decision to be made on disposing of comments or revising terms of reference (TOR)
 - 9--Flight loads distribution; rpr being drafted
 - 10--§ 25.365 sent to Executive Committee; comments are due September 8.
 - 11--Ground handling conditions; tasking sent to TAE; FAA awaiting ARAC's response

JAA Report

Thaddee Sulocki indicated that five unilateral NPA's related to structures, flight, systems, power-plant, and cabin safety were published the first part of August; comments are expected by the first of November. Change 15 to JAR 25 will be published October 1. As followup to questions at earlier TAE meetings, he indicated that NPA's are not available for free, only by subscription. The JAA, however, does accept comments from everyone, and it disposes all comments. Mr. Sulocki also indicated that NPA's are available on CD-ROM; interested parties can subscribe to the web site. Notices of availability are available at no charge.

Mr. Sulocki provided an update on the JAA Agenda for Change. He said that two sectorial teams are in place--one for regulations; the other for maintenance. In addition to members of the former regulations advisory panel, participation at the Regulation Sectorial Team meeting include representatives from the FAA, Transport Canada, Aerospace Industries Associations of America and Canada, International Civil Aviation Organization, European Union (EU), and Euro Control, and others. He said there is still need to reorganize and that a group would be set up to determine how to proceed. He further indicated that airworthiness study groups are under the Regulations Division and, in the future, should be transferred to the certification division. Transfer of responsibility will not occur until mid or later next year. Mr. Sulocki also discussed European Aviation Safety Agency (EASA) as compared to the JAA, and the 15 countries of the EU. He

said that EU is drafting regulation for the European agency that will supersede the JAA. It is expected to be in place in 2003. He said that rather than the 15 Transport Ministers, EASA will report to the Commissioner of Transport.

Transport Canada

Mr. Maher Khouzam announced that the FAA attorneys found a way to resolve the impasse regarding the FAA findings on design data approved by TCCA for repairs, STC's, etc., and that the FAA and TCCA are now ready to sign the IPA. He also reported the development of a Part Design Approval (PDA) in Canada which, associated with a manufacturing quality assurance program, will parallel the FAA-PMA. The concept is covered in the IPA. He reported concerns from the Canadian modifiers (STC) with the implementation of the CPR.

Mr. Khouzam also reported on the signing of the first 21N arrangement between the JAA and TCCA during the FAA/JAA annual conference and the decision of the signatories to replace this one-way arrangement, with a two-way arrangement by June 2001.

Executive Committee (EXCOM) Report

Mr. Bolt reported that the committee had met August 8. The new task on fuel tank inerting is being managed by EXCOM. Mr. Bolt indicated that other discussion items included: (1) ongoing ARAC voting policy (i.e., absentee voting, use of proxy); Tony Fazio, Director of Rulemaking, was expected to revisit the policy at the November 9 EXCOM meeting; (2) two new members had joined ARAC--Embraer and the National Air Disaster Alliance/Foundation; (3) review of the DOT order on advisory committees which stipulates that meeting should be held in Washington, DC; exception can be made if adequate justification is given; and (4) looks likely that justification that many working group chairs are located at Boeing and location of Transport Aircraft Directorate may be adequate to hold two TAE issues group meetings in Seattle, WA and two meeting in Washington, DC.

Paul Hudson expressed concern about the flexibility of TAE issues group meetings versus other ARAC issues group meeting, and pointed to a statement by the Coalition of Airline Pilots Associations which was distributed at the meeting (handout 5). (Mr. Bolt distributed copies to TAE members and requested comments by November 1). Mr. Hudson questioned the lack of balance on issues and working groups, and whether TAE conducted outreach to nonindustry participants and invited them to join.

Participants then held a lengthy discussion on the impact of the lateness of involvement of public citizen groups in TAE working groups, voluntary membership in working groups, impact of one memo covering all ARAC regarding meeting locations, effectiveness of current TAE operations (i.e., time and place), participation by international representatives, and the evolution of ARAC meetings (from being held in the Washington area because of members' locations) to the current state of meetings being held outside the Washington area. Keith Barnett drafted language for a proposed letter to be sent to the FAA; TAE members voted (6 in favor, 1 opposed, and 2 abstained) to include the following language in the letter:

The concern raised by TAEIG at the Sept 12 meeting focused on the FAA rationale that locates public meetings in the Washington DC area.

The motion is for TAEIG to send a letter to the ARAC executive Chair (Tony Fazio) regarding the economics & practicality for meeting locations. The letter should emphasize the international nature of TAEIG active participants, as well as of ARAC itself.

The expectation is that TAEIG would be given the authority to choose meeting location(s) that will encourage balanced participation, in consideration of the economic burden, that will produce the best “product” for ARAC.

Mr. Bolt requested that Brenda Courtney provide a list of all organizations that are members of ARAC. He also requested that working group chairs provide an updated list of their members, indicating areas in which they would like to have representation in areas currently not covered.

Human Factors Harmonization Working Group (HWG)

Before discussing the working group report (handout 6), Curt Graeber complimented TAE on its current meeting locations. Mr. Graeber said that the working group is currently defining “design-related” as opposed to “operator” function; determining what information needs to be reviewed; and looking at the interrelationship of subgroups and combining groups as objectives are met. He discussed the dynamics of the working group, which includes representatives from the US and European industries, a pilot organization, and a university. He indicated that the group had lost three members (one academia representative was not making a contribution and another changed companies (the former company is no longer willing to support the effort), and that there is concern about continued EC funding. He also expressed concern about working group recommendations not accepted by the authorities before the final phase and communication so there are no surprises.

Avionics Systems HWG

Mr. Bolt reported the following status of the working group (handout 7):

Section	Action
25.1333	--Fast track report sent to FAA; revised report responds to FAA comments regarding “sufficient information” --HWG to write proposed tasking to resolve inconsistencies in current requirements for heading sources vs. what is done today
25.1322	--Needs to be tasked. Ms. Carpenter/Mr. Bolt/AVHWG/HFHWG to discuss via telecon to clarify status of TOR.
25.1327 & .1328	--Fast track report and AC have been modified as agreed at June TAE meeting and sent to FAA

General Structures HWG

Amos Hoggard distributed a status report (handout 8) and provided the following updates;

Section	Action
25.963	--Paris, Concorde accident has caused concerns about

	fuel tank access panel protection --FAA wants to put a hold on HWG recommended NPRM, but issue recommended AC (handout 9) --FAA and JAA to go back to determine HWG next action; due to Mr. Bolt by September 15
25.561	Continuing HWG review
25.631, .775, and .571	--August 23 FAA letter indicated nonacceptance of recommendation while in FAA for legal/economic reviews (handout 10) --JAA is more willing to accept 8-lb bird weight; concern about amount of energy --Working group to discuss cutback speed at September 25 meeting --Other discussion items included looking at criticality to protect against energy

Airworthiness Assurance Working Group

Mr. Hoggard provided the following update

Section	Action
Widespread Fatigue Damage	--Expect completion of legal review by September 30 --Meeting with TOGAA scheduled for September 14; TOGAA has taken exception to some definitions, such as "excessive structural deformation" which has been in advisory material for some time --HWG expects to deliver rule and AC package to TAE by November 5 for December TAE meeting

Seat Test HWG

Mr. Bolt indicated that all fast track reports are in the FAA awaiting review. Ms. Carpenter indicated that ACO engineers are meeting with the Transport Directorate on how to incorporate into user friendly manual.

Engine HWG Report

Mr. Bolt, reporting for Jerry McRoberts, distributed a status report (handout 11). He provided the following updates:

Section	Action
Engine electronic controls	--Task group preparing responses to minority positions --Working group expects to submit NPRM and AC to TAE for vote at December meeting
Engine bird ingestion requirements phase II	--Initial focus on evaluating threat posed by large flocking birds --Group working on updating data, including information on bird strike, size, quantities, and locations
Critical parts integrity rule initiative	TOR w/FAA/JAA management teams --Mr. Bettcher indicated that he and ALPA see rulemaking as an enlightenment for critical parts assumption and that same principle described in TOR should be applied to all certification

Ice Protection HWG

Dennis Newton reported via telephone (handout 12). Following a discussion and clarification of § 25.1420 (how is accumulation addressed in operation rule), possibility of ice accretion, pilot requirement to identify, and visual cues on specific surfaces, members voted unanimous approval of concept

Powerplant Installation HWG

Mr. Andrew Lewis-Smith distributed a status report (handout 13) and provided the following updates:

Section	Action
25.1193	Wording changes made to fast track report; Mr. Bolt to send out for electronic vote
25.1187/863	Report will be completed by November 1 for vote at December TAE meeting
25.904, appendix I	Expect to deliver to TAE by November 1 for vote at December TAE meeting
25.903(d)	Expect to deliver new TOR to FAA by November 1

Mechanical Systems HWG

Jeannie Yu distributed a status report (handout 14) and provided the following updates:

Section	Action
25.851(b)	--HWG concern about point concentration; report due for approval at HWG on October 26 --Boeing wants to do additional testing; HWG must determine whether to test or send forward with Boeing minority opinion
25.1453	One outstanding issue—maximum temperature/pressure
25.831(g) & 25.841(a)	Awaiting FAA tasking

Review of June Meeting Minutes

Following discussion of recording fast track report changes, clarifications, and typographical errors, members agreed that the revised minutes should be distributed electronically for vote. Other items included process for finalizing minutes and availability on website.

Mr. Hudson requested that a paper copy of regulations be available at future meetings.

Flight Guidance HWG

Dale Dunford distributed a status report (handout 15) and indicated that the working group has consensus for the rule (§ 25.1329), but no consensus for the AC. He indicated that there is concern about applicability and how to address it to the current system, and the degree of effect on “limitations.” Mr. Bettcher expressed concern that the working group is taking “undue” consideration of economic impact, Mr. Dunford responded that the working group considerations included retrofits, autopilot equipment, support, and interfacing.

Discussion items included the FAA’s process considerations, flight data recorder data points, and application to this project. Following a request by Mr. Bettcher for a briefing by the All Weather Operations HWG, discussion items turned to issues being considered by the working group, aircraft categories covered by AC 120-28 and AC 120-29, and changes made to the AC without public comment. Mr. Dunford also expressed concern that the working group members’ efforts were being put aside. Mr. Bettcher asked the FAA to take concerns expressed about this process forward and to help maintain motivation for participation in other ARAC working groups.

System Design and Analysis HWG

Ms. Carpenter indicated that on July 21, industry met with FAA representatives and Beth Erickson to discuss § 25.1309 which was submitted to the FAA without specific risk assessment requirements; the TAE issues group had suggested that specific risk should be included in phase 2. Mrs. Erickson expressed concern and, as a result, the package will be returned to the working group after the FAA modifies the package with specific data that supports specific risk; working group to include more expertise, including air carriers; and group agreed that it is acceptable to use in certification projects/method of compliance. The FAA agreed to coordinate its response with the JAA (letter over Beth Erickson’s signature to be returned to TAE with agreement). Immediate concerns include loss of chair (John Ackland has indicated that he is not able to continue), and the potential inability to get former members back. As a result of the discussion, Ms. Courtney was asked to look at other than US citizens serving as working group co-chairs.

ETOPS Tasking Update

Mr. Bolt indicated that the group has held two meetings. It has broad membership including manufacturers, airlines, pilot unions, regulatory authorities, and public citizen groups (membership list available from Craig). He also indicated that he would continue to have updates at future TAE meetings. (See handouts 16-18).

Flight Test HWG

Robert Park distributed a status report (handout 19) and indicated that the working group was reviewing the draft NPRM prepared by the FAA. The group had found minor changes/typo's. In response to Mr. Park's question of whether the working group needed to do anything to move the project to phase 5, Ms. Carpenter indicated that no further action was needed unless there were major changes. Jim Bettcher questioned the method in which TAE tracks and flag projects for phases 4 and 5. Ms. Carpenter indicated that the FAA would flag substantive changes and provide some type of record. The process allows TAE to be aware of changes, and significant changes should come back to TAE.

Mr. Park indicated that Appendix I (developed within the PPIHWG) had been distributed to the FTHWG members for comments; additional time for comment may be needed because of holiday schedule of JAA members.

Electromagnetic Effects HWG

Joe Cross described the changes that have been integrated into the NPRM and AC on electromagnetic effects (handout 20). He indicated that regulatory language had been moved from the AC and that the regulatory evaluation was not included in the package. Section 25.581 remains; awaiting 25X899, but he believes FAA representative can handle. TAE transmittal letter will ask FAA to upgrade its processing priority.

The EEHWG has no meeting plans; Mr. Cross expects that members can meet with economist via teleconference. He further indicated that the executive committee of the EEHWG would probably dispose of comments once the documents are published. Other discussion items included FAA priority (JAA would like FAA to change priority; JAA is handling project as level A and JAA may be pressured to publish NPA and final rule before FAA publishes NPRM because of its current use of special conditions.) Other discussion items included user's guide. Members voted in the following manner to submit the report to the FAA: 1 abstention, 7 favorable, 0 opposition.

Loads and Dynamics HWG

Larry Hanson reported to the working group via phone (handout 21) and provided the following highlights:

Section	Action
25.415 and 25.865	--Expect to have for December TAE issues group meeting or earlier ad hoc meeting
Ground handling, landing descent velocity and towing TOR	--Plans to submit work plans at December TAE meeting --Current data indicates that limit design data may be inadequate
Flight loads measurement TOR 25.301(b)	--Expect TOR to be presented to the FAA rulemaking council in November --HWG may not be able to present work plan at Dec meeting
25.671(c)(2), and 25.1309	--LDHWG will need to work with FCHWG --Mr. Hanson indicated that he would submit an informal work plan

Other discussion items included status of fuel tank NPRM (documents in process; technical writers coordinating with legal, and incorporating JAA comments); JAA involvement in the LDHWG (3 members) and review of letter from the PPIHWG re §25.969(d)

Flight Control HWG

Larry Schultz distributed an activity report (handout 22). He indicated that there was general agreement on roles and structures within the working group, and that specific risk could affect §§ 25.671, as well as 25.1309. No meetings have been planned for resolution; group is working on fast track report. Dissenters should present their opinions; information will be circulated, documented and forwarded with fast track report. Fast track report will be presented at December TAE meeting. The need to resolve dissenting opinions was discussed and the working group was tasked to do that by early November and to forward to TAE issues group members for review.

Design for Security HWG

Mark Allen distributed an activity report (handout 23) and provided an overview of the group's activities. Discussion items on the eight ICAO rules included:

Section	Action
Flight deck smoke protection extraction	--Current section may be adequate
Cabin smoke extraction	--Mr. Bettcher suggested looking at US Air Force testing involving smoke removal in cargo planes
Cargo compartment fire suppression	--Working group has no data --looking at Swiss Air accident testing data and looking at test data on misting system --Mr. Bettcher advised Mr. Allen to contact him for other potential contacts
System Survivability	--System vs. structure design; ICAO is addressing structure; critical systems have not been identified
Least Risk Bomb Location	--Working group considerations include effect of being pressurized which increase structural problems --Discussion items included inclusion of bomb resistant luggage container; design that requires skin to peel off, and protection against small devices
Design for Interior Search	--Main emphasis not on "how to inspect" but to make it "easier" to inspect --Access to general public vs. cleaning people, etc., has not yet been decided
Penetration Resistance	--Intended to protect flight crew from any angle --Type III-A protection does not cover rifles
Cockpit Intrusion	--Working group trying to understand threat --ATA to survey airlines to determine extent of threat --Other discussion items include consideration of self-locking mechanism

Electrical Systems HWG

Brian Overhuls reported via telephone. He indicated that no working group meetings had been held since June; the working group expects to meet at the end of October to identify remaining tasks set aside by fast track. Mr. Overhuls also indicated that the ESHWG disagreed with additional wording for § 25.1362. Mr. Bettcher removed his objections.

Wrapup

Action Items: Mr. Bolt reviewed the Action Items, closing items 9 and 11

Future Meetings: Mr. Bolt reminded members of the December 5-6 meeting to be held in Washington D.C. He also reviewed the meeting dates for 2001: March 27-28; June 26-27; September 11-12, and December 4-5.

Adjournment: The meeting adjourned at 3:25 p.m.

Craig Bolt
Assistant Chair

Approved with Revisions: December 6, 2000

ACTION ITEMS
(September 12-13, 2000)

1. C. Bolt to have WG tasking charts sent electronically to group.
2. T. Sulocki to provide list of appropriate JAA web sites.
3. JAA to prepare Terms of Reference for 25x745.
4. TAEIG to send comments on CAPA statement to C. Bolt by 9/30.
5. C. Bolt to send note to all ARAC members regarding December Issues Group meetings.
6. C. Bolt to obtain rosters of WG groups and poll WG chairs to see if they need other members to assure appropriate balance between different interests.
7. Brenda Courtney to provide C. Bolt with list of ARAC members and contact information.
8. C. Bolt to send letter to FAA based on K. Barnett's approved motion regarding meeting locations.
9. Kris Carpenter/C. Bolt to schedule telecon with HF and AV Working Group Chairs to be sure TOR's for 25.1322 and AC/AMJ 25.1322 and AC/AMJ 25-11 are coordinated. - Closed
10. Kris Carpenter/John McGraw/Thaddée Sulocki to review proposed changes in 25.963(e), fuel tank access covers, to determine if rule should go forward or wait for re-evaluation under new tasking. T/D - October 15 to Issues Group.
11. John McGraw to check on details of NTSB recommendation relating to COMAIR accident and minimum maneuvering speed. - Closed
12. C. Bolt to circulate revised June minutes for e-mail vote by TAEIG.
13. Issues Group to provide recommendation for SDAHWG co-chair as well as new members.
14. Brenda Courtney to investigate acceptability of a Canadian or Brazilian as a WG co-chair instead of US co-chair.
15. Thaddée Sulocki to review letter from Powerplant Study Group regarding concerns on LDHWG report for 25.963(d) and to determine path forward by next LDHWG meeting on September 26-28.
16. Thaddée Sulocki to work to get better representation of European participants in the Design for Security WG.
17. Paul Hudson to canvas other organizations regarding interest in participation in the Design for Security Working Group in order to provide a better cross-section of representation.
18. John McGraw to provide proposed plan to respond to NTSB recommendations on COMAIR accident re: maneuvering speeds.
19. T. Sulocki to be sure JAA position on 8 lb. birds is conveyed to GSHWG prior to next meeting.

Open Items from March 2000 Meeting

T. Sulocki and Kris Carpenter to determine how JAA/FAA will address lack of harmony in 25.562 seats. (JAA rule does not include pilot or flight attendant seats, FAA rule does, but some exemptions have been granted for pilot seats regarding pitch and roll.)

Open Items from June 2000 Meeting

FTHWG to draft TOR for follow on work on 25.177(c).