Federal Aviation Administration – Regulations and Policies
Aviation Rulemaking Advisory Committee

Occupant Safety Issue Area
Cabin Safety Harmonization Working Group

Task 6 – Type III and Type IV Exit Access Requirements

Task Assignment

[Federal Register: November 26, 1999 (Volume 64, Number 227)]
[Notices]
[Page 66522-66524]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Aviation Rulemaking Advisory Committee; Transport Airplane and Engine Issues--New and Revised Tasks

AGENCY: Federal Aviation Administration (**FAA**), DOT.

ACTION: Notice of new and revised task assignments for the Aviation Rulemaking Advisory Committee (ARAC).

SUMMARY: Notice is given of new tasks assigned to and accepted by the Aviation Rulemaking Advisory Committee (ARAC) and of revisions to a number of existing tasks. This notice informs the public of the activities of ARAC.

FOR FURTHER INFORMATION CONTACT: Dorenda Baker, Transport Airplane Directorate, Aircraft Certification Service (ANM-110), 1601 Lind Avenue, SW., Renton, WA 98055; phone (425) 227-2109; fax (425) 227-1320.

SUPPLEMENTARY INFORMATION:

Background

The **FAA** has established an Aviation Rulemaking Advisory Committee to provide advice and recommendations to the **FAA** Administrator, through the Associate Administrator for Regulation and Certification, on the full range of the **FAA**'s rulemaking activities with respect to aviation-related issues. This includes obtaining advice and recommendations on the **FAA**'s commitment to harmonize its Federal Aviation Regulations (FAR) and practices with its trading partners in Europe and Canada.

One area ARAC deals with is transport airplane and engine issues. These issues involve the airworthiness standards for transport category

[[Page 66523]]

airplanes and engines in 14 CFR parts 25, 33, and 35 and parallel provisions in 14 CFR parts 121 and 135. The corresponding Canadian standards are contained in Parts V, VI, and VII of the Canadian Aviation Regulations. The corresponding European standards are contained in Joint Aviation Requirements (JAR) 25, JAR-E, JAR-P, JAR-OPS-Part 1, and JAR-26.

As proposed by the U.S. and European aviation industry, and as

agreed between the Federal Aviation Administration (**FAA**) and the European Joint Aviation Authorities (JAA), an accelerated process to reach harmonization has been adopted. This process is based on two procedures:

(1) Accepting the more stringent of the regulations in Title 14 of the Code of Federal Regulations (FAR), Part 25, and the Joint Airworthiness Requirements (JAR); and

(2) Assigning approximately 41 already-tasked significant regulatory differences (SRD), and certain additional part 25 regulatory differences, to one of three categories:

<bullet> Category 1--Envelope
<bullet> Category 2--Completed or near complete
<bullet> Category 3--Harmonize

The Revised Tasks

ARAC will review the rules identified in the ``FAR/JAR 25 Differences List,'' dated June 30, 1999, and identify changes to the regulations necessary to harmonize part 25 and JAR 25. ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**. The tasks currently underway in ARAC to harmonize the listed rules are superseded by this tasking.

New Tasks

The **FAA** has submitted a number of new tasks for the Aviation Rulemaking Advisory Committee (ARAC), Transport Airplane and Engine Issues. As agreed by ARAC, these tasks will be accomplished by existing harmonization working groups. The tasks are regulatory differences identified in the above-referenced differences list as Rule type = P-SRD.

New Working Group

In addition to the above new tasks, a newly established Cabin Safety Harmonization Working Group will review several FAR/JAR paragraphs as follows:

ARAC will review the following rules and identify changes to the regulations necessary to harmonize part 25 and JAR:

(1) Section 25.787;
(2) Section 25.791(a) to (d);
(3) Section 25.810;
(4) Section 25.811;
(5) Section 25.819; and
(6) Section 25.813(c).

ARAC will submit a technical report on each rule. Each report will include the cost information that has been requested by the **FAA**.

The Cabin Safety Harmonization Working Group would be expected to complete its work for the first five items (identified as Category 1 or 2) before completing item 6 (identified as Category 3).

Schedule

Within 120 days of tasking/retasking:

<bullet> For Category 1 tasks, ARAC submits the Working Groups' technical reports to the **FAA** to initiate drafting of proposed rulemaking documents.

<bullet> For Category 2 tasks, ARAC submits technical reports, including already developed draft rules and/or advisory materials, to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

June 2000: For Category 3 tasks, ARAC submits technical reports including draft rules and/or advisory materials to the **FAA** to complete legal review, economic analysis, coordination, and issuance.

ARAC Acceptance of Tasks

ARAC has accepted the new tasks and has chosen to assign all but one of them to existing harmonization working groups. A new Cabin Safety Harmonization Working Group will be formed to complete the remaining tasks. The working groups serve as staff to ARAC to assist ARAC in the analysis of the assigned tasks. Working group recommendations must be reviewed and approved by ARAC. If ARAC accepts a working group's recommendations, it forwards them to the **FAA** and ARAC recommendations.

Working Group Activity

All working groups are expected to comply with the procedures adopted by ARAC. As part of the procedures, the working groups are expected to accomplish the following:

1. Document their decisions and discuss areas of disagreement, including options, in a report. A report can be used both for the enveloping and for the harmonization processes.

2. If requested by the **FAA**, provide support for disposition of the comments received in response to the NPRM or review the **FAA**'s prepared disposition of comments. If support is requested, the Working Group will review comments/disposition and prepare a report documenting their recommendations, agreement, or disagreement. This report will be submitted by ARAC back to the **FAA**.

3. Provide a status report at each meeting of ARAC held to consider Transport Airplane and Engine Issues.

Partcipation in the Working Groups

Membership on existing working groups will remain the same, with the formation of subtask groups, if appropriate. The Cabin Safety Harmonization Working Group will be composed of technical experts having an interest in the assigned task. A working group member need not be a representative of a member of the full committee.

An individual who has expertise in the subject matter and wishes to become a member of the Cabin Safety Harmonization Working Group should write to the person listed under the caption FOR FURTHER INFORMATION CONTACT expressing that desire, describing his or her interest in the tasks, and stating the expertise he or she would bring to the working group. All requests to participate must be received no later than December 30, 1999. The requests will be reviewed by the assistant chair, the assistant executive director, and the working group chair, and the individuals will be advised whether or not the request can be accommodated.

Individuals chosen for membership on the Cabin Safety Harmonization Working Group will be expected to represent their aviation community segment and participate actively in the working group (e.g., attend all meetings, provide written comments when requested to do so, etc.). They also will be expected to devote the resources necessary to ensure the ability of the working group to meet any assigned deadline(s). Members are expected to keep their management chain advised of working group activities and decisions to ensure that the agreed technical solutions do not conflict with their sponsoring organization's position when the subject being negotiated is presented to ARAC for a vote.

Once the working group has begun deliberations, members will not be added or substituted without the approval of the assistant chair, the assistant executive director, and the working group chair.

The Secretary of Transportation has determined that the formation and use of ARAC are necessary and in the public interest in connection with the performance of duties imposed on the **FAA** by law.

[[Page 66524]]

Meetings of ARAC will be open to the public. Meetings of the working groups will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on November 19, 1999.

Anthony F. Fazio,

Executive Director, Aviation Rulemaking Advisory Committee.

[FR Doc. 99-30774 Filed 11-24-99; 8:45 am]

BILLING CODE 4910-13-M

Recommendation – Not Available

FAA Action – Not Available

Recommendation Letter

December 19, 2002

Anthony F. Fazio
Executive Director
Aviation Rulemaking Advisory Committee
Federal Aviation Administration
800 Independence Avenue S.W.
Washington, D.C. 20591

Subject: **Cabin Safety Harmonization Working Group Recommendations**

Dear Mr. Fazio:

At the October 17, 2002 meeting of the Aviation Rulemaking Advisory Committee Occupant Safety Issues Group (OSIG), the Cabin Safety Harmonization Working Group (CSHWG) presented a report concerning the harmonization of FAR Part 25.813. This was in response to a tasking made by the FAA in December 1999.

In addition to the final report prepared by the working group, members of the working group prepared two dissenting views. As part of the working group report, dissenting views forming two large groups (together representing about 2/3rds of the membership) were documented and submitted to the OSIG (with the report). The OSIG discussed the final report and the dissenting views. The OSIG requested the co-chairs to provide a matrix summarizing the differences in positions.

The OSIG agreed that the report and the dissenting views represent the best available output from the working group and that additional working group activities are unlikely to result in further progress at this time. The CSHWG report is enclosed.

This action completes the tasking of the CSHWG.

Best Regards,

Billy M. Glover
Assistant Chair of the Aviation Rulemaking Advisory Committee
Occupant Safety Issues Group

Enclosure (4)
1) CSHWG Report
2) CSHWG Report Matrix
3) Attachment 1 Dissenting View
4) Attachment 2 Dissenting View

cc: Mike Kaszycki
OSIG members and associates

Recommendation

ARAC Cabin Safety Harmonization Working Group (CSHWG) Report

FAR/JAR 25.813(c)

1 - What is underlying safety issue to be addressed by the FAR/JAR? [Explain the underlying safety rationale for the requirement. Why should the requirement exist? What prompted this rulemaking activity (e.g., new technology, service history, etc.)?]

The safe and expeditious evacuation of aircraft occupants in an emergency (for example: fire in the cabin), enabled by the application of appropriate design criteria for access to emergency exits. Recent accidents have demonstrated that proper access to emergency exits expedites emergency evacuation of aircraft in an emergency.

2 - What are the current FAR and JAR standards relative to this subject? [Reproduce the FAR and JAR rules text as indicated below.]

Current FAR text:

(c) The following must be provided for each Type III or Type IV exit--

(1) There must be access from the nearest aisle to each exit. In addition, for each Type III exit in an airplane that has a passenger seating configuration of 60 or more--

(i) Except as provided in paragraph (c)(1)(ii), the access must be provided by an unobstructed passageway that is at least 10 inches in width for interior arrangements in which the adjacent seat rows on the exit side of the aisle contain no more than two seats, or 20 inches in width for interior arrangements in which those rows contain three seats. The width of the passageway must be measured with adjacent seats adjusted to their most adverse position. The centerline of the required passageway width must not be displaced more than 5 inches horizontally from that of the exit.

(ii) In lieu of one 10- or 20-inch passageway, there may be two passageways, between seat rows only, that must be at least 6 inches in width and lead to an unobstructed space adjacent to each exit. (Adjacent exits must not share a common passageway.) The width of the passageways must be measured with adjacent seats adjusted to their most adverse position. The unobstructed space adjacent to the exit must extend vertically from the floor to the ceiling (or bottom of sidewall stowage bins), inboard from the exit for a distance not less than the width of the narrowest passenger seat installed on the airplane, and from the forward edge of the forward passageway to the aft edge of the aft passageway. The exit opening must be totally within the fore and aft bounds of the unobstructed space.

(2) In addition to the access--

(i) For airplanes that have a passenger seating configuration of 20 or more, the projected opening of the exit provided must not be obstructed and there must be no interference in opening the exit by seats, berths, or other protrusions (including any seatback in the most adverse position) for a distance from that exit not less than the width of the narrowest passenger seat installed on the airplane.

(ii) For airplanes that have a passenger seating configuration of 19 or fewer, there may be minor obstructions in this region, if there are compensating factors to maintain the effectiveness of the exit.

(3) For each Type III exit, regardless of the passenger capacity of the airplane in which it is installed, there must be placards that--

(i) Are readable by all persons seated adjacent to and facing a passageway to the exit;

(ii) Accurately state or illustrate the proper method of opening the exit, including the use of handholds; and

(iii) If the exit is a removable hatch, state the weight of the hatch and indicate an appropriate location to place the hatch after removal.

Current JAR text:

(c) There must be access from each aisle to each Type III or Type IV exit, and –

(1) For aeroplanes that have a passenger seating configuration, excluding pilot's seats, of 20 or more, the projected opening of the exit provided may not be obstructed and there must be no interference in opening the exit by seats, berths, or other protrusions (including seatbacks in any position) for a distance from that exit not less than the width of the narrowest passenger seat installed on the aeroplane.

(2) For aeroplanes that have a passenger seating configuration, excluding pilots seats, of 19 or less, there may be minor obstructions in this region, if there are compensating factors to maintain the effectiveness of the exit.

2a – If no FAR or JAR standard exists, what means have been used to ensure this safety issue is addressed? [Reproduce text from issue papers, special conditions, policy, certification action items, etc., that have been used relative to this issue]

Both FAR and JAR standard exists.

3 - What are the differences in the FAA and JAA standards or policy and what do these differences result in?: [Explain the differences in the standards or policy, and what these differences result in relative to (as applicable) design features/capability, safety margins, cost, stringency, etc.]

The FAR is more stringent than the JAR. The FAR mandates minimum dimensions for the access to Type III exits, while the JAR does not. The JAA has accepted the application of criteria similar to the FAR requirements on some new certification/validation programs.

The requirements in FAR 25.813 (c) were based on testing that had shown improved evacuation rates for configurations in which passageway between the seat rows adjacent to the exit on the side containing three seats is 20 inches; however, subsequent testing in 1995 demonstrated that access provided by passageways 13 inches in width, with the centerline of the passageway displaced

horizontally no more than 6.5 inches from the exit centerline, is equivalent to that provided by 20 inch passageways. Since that time the FAA has granted findings of an equivalent level of safety for that configuration.

For passageways in excess of the minimum width, the FAA has allowed horizontal displacement (offset) of the passageway in excess of the maximum limit, so long as the passageway width is increased above the minimum width to account for twice the excess offset.

The FAA has published a notice of proposed rulemaking (NPRM) 95-1, based on the 1995 testing, that proposes to revise the requirements for passageways adjacent to the exit on the side containing three seats from 20 inches to 13 inches in width with the centerline of the required passageway width not displaced horizontally from the exit centerline by more than 6.5 inches. The final rule was drafted and sent to FAA Headquarters for approval, but was subsequently withdrawn pending the recommendations of the ARAC.

The FAA issued an amendment to the operating regulations for air carriers, FAR 121.310(f)(3), that required compliance with FAR 25.813(c) after December 3, 1992. This amendment to FAR 121.310(f)(3) also provided that the Manager of the Transport Airplane Directorate, Aircraft Certification Service, FAA, could authorize deviations from the requirements of FAR 121.310(f)(3) under special circumstances. Many air carriers applied for and were granted an equivalent level of safety finding for 13-inch passageway configurations.

The JAA has published Notice of Proposed Amendment (NPA) 25D-270, which proposes altered, as well as additional, requirements for Type III exits beyond those in FAR and JAR Parts 25 and proposed in NPRM 95-1. The differences include:

- for airplanes having passenger seating configurations of 20 or more, the actual projected opening of each exit to the nearest aisle must not be obstructed, (versus a FAR/JAR Part 25 requirement for a non-obstructed distance from the exit of not less than the width of the narrowest passenger seat installed on the airplane).
- for configurations having a single passageway leading to a single exit, the passageway must be not less than 10 inches wide, nor more than 25 inches wide, with the adjacent seat obstructing the projected exit opening no more than 4 inches beyond the exit centerline, (versus the FAR Part 25 requirement of at least 20 inches with a maximum 5 inch offset on the side containing three seats and 10 inches with a maximum 5-inch offset on the side containing no more than two seats. The NPRM proposes a passageway 13 inches wide with a maximum 6.5 inch offset on sides containing three seats, without changing requirements for interior arrangements in which the adjacent seat rows on the exit side of the aisle contain no more than two seats).

- for airplanes having two passageways, between seat rows only, leading to the same exit, a primary passageway at least 10 inches wide and a secondary passageway at least 6 inches wide are required (versus FAR requirements of a 6-inch minimum width for both). The distance between the centerline of the primary passageway and the centerline of the adjacent exit must not be greater than 10 inches (versus the FAR which requires that the exit opening must be totally within the fore and aft bounds of the unobstructed space).
- for airplanes type certificated for a maximum passenger seating capacity of 60 or more (versus FAR requirements for passenger seating configurations of 60 or more), the passageways must be configured as above.

The following NPA items are not in either the FARs or the JARs:

- The seat backs of all seats bounding the passageway to a Type III or Type IV exit must have restricted movement, i.e., remain in an essentially upright position (not exceeding 20 degrees rearward and 10 degrees forward) under loads of up to 668 N (150 lbf) applied horizontally at the top of the seat.
- The design of all seats bounding the passageways leading to each Type III or Type IV exit must be free from coat hooks and any protrusion which may impede evacuation.
- The design and arrangement of all seats leading to each Type III or Type IV exit must be free from any gap which might entrap a foot or other part of a person standing or kneeling on the seat.
- Table latch designs of seats adjacent to the passageways leading to each Type III or Type IV exit must be such that inadvertent release by evacuating passengers will not occur.
- Movable, quick-change, class dividers must not be installed adjacent to passenger seats at positions such that the dividers would form the boundary of a passageway leading to a Type III or Type IV exit.
- For each passageway leading to a Type III or Type IV exit, a placard must be installed to indicate that no baggage shall be stowed in the under seat stowages in or in front of that passageway.

4 - What, if any, are the differences in the current means of compliance? [Provide a brief explanation of any differences in the current compliance criteria or methodology (e.g., issue papers), including any differences in either criteria, methodology, or application that result in a difference in stringency between the standards.]

See question number 3.

5 – What is the proposed action? [Describe the new proposed requirement, or the proposed change to the existing requirement, as applicable. Is the proposed action to introduce a new standard, or to take some other action? Explain what action is being proposed (not the regulatory text, but the underlying rationale) and why that direction was chosen for each proposed action.]

The group determined that three separate, but related, issues need to be addressed to achieve an acceptable new harmonized standard for Type III exits. These are (i) the basic access to the exit from the aisle, (ii) the design and operation of the exit that would ensure that the specified access was protected, and (iii) other design features in the cabin that are determined to be necessary to ensure as efficient as practicable operation of the exit.

Type III Exit Access

Proposal

For airplanes with a passenger seating capacity of 20 or more:

A minimum passageway width of 10 inches for two seats abreast, and 13 inches for three seats abreast. At least 10 inches of the required passageway must be within the projected width of the exit aperture.

The Outboard Seat Removed (OSR) configuration is allowed with two 6 inch passageways.

Rationale

The group reviewed the data from evacuation trials conducted at CAMI in 2001 as well as earlier trials at CAMI and Cranfield. The conclusion was that the main variable is the people characteristics and, in order to allow for a reasonable cross-section of the population, the proposed minimum dimensions should be provided.

The 10 inch and 13 inch passageways are similar either to those required by some national requirements or to deviations granted by the regulators at the request of airlines and/or manufacturers and voluntarily provided by manufacturers. It was not considered necessary to define any requirement for access past a single seat because of absence of data and a judgment that this configuration was not critical to egress.

The OSR configuration was decided suitable for continued use because, despite some earlier comment and evidence that it was more liable to periodic egress rate slow down or even blockage, more recent test data supports an earlier observation that the egress rates can be as quick or quicker than for the single access path and the tendency for slow down and blockage is not sufficiently substantiated.

Non-Disposable Hatch Design, or Automatically Opening Exit (‘AOE’)

Proposal

For airplanes with a passenger seating configuration of 41 or more:

The Type III exit shall be designed such that, when opened, the hatch/door cannot reduce the size of the exit opening and/or adjacent passageways below the required minimum dimensions, nor shall it obstruct the required exit access to or from the exit in any way.

Rationale

The traditional removable hatch design for Type III exits has been recognized as having potential inherent limitations with regard to operation and disposal. Research trials have not always included full evaluation of the situations that could arise with respect to the hatch. However, the latest CAMI tests, where the hatch was deliberately positioned inside the cabin for some cases, confirmed that adverse positioning, which affected the access or the exit aperture, could happen and that this, on occasion, could affect egress rate. In addition, accident experience has resulted in some comment that the disposable hatch should be discontinued. The group decided that, taking these factors into account, and in the knowledge that an efficient non-disposable Type III exit design was already certificated and in service, it was justifiable to require such an exit on new type certificated aircraft.

The aircraft size discriminant for requiring this design is proposed as 41 or more passenger seats. This is based primarily on the estimate that smaller aircraft would involve a large design and cost penalty for incorporating such a feature. However, it was also recognized that smaller aircraft could benefit significantly and more work would be required to make a final decision.

Other Cabin Design Features

Proposal

The following are required:

(a) All seats bounding the passageway to a Type III or Type IV exit must be restricted with respect to any movement that would reduce access to the exit or impede emergency evacuation (for interior configurations having 20 or more passenger seats that may be occupied for taxi, takeoff, and landing).

(b) All seatbacks bounding the passageway to a Type III or Type IV exit must be capable of maintaining the essentially upright position under loads of up to 668 N (150 lbf).

(c) All seats bounding the passageway to a Type III or Type IV exit must be free from any protrusion (coat hooks, etc.) that could impede emergency evacuation.

(d) All seats, and their arrangements, bounding the passageway to a Type III or Type IV exit must be free from any gap or encumbrance that could entrap a foot or other part of a person standing or kneeling on the seat.

(e) Tables and table latches on seatbacks bounding the passageway to a Type III or Type IV exit must be designed to preclude inadvertent release by evacuating passengers.

(f) Movable, quick-change, cabin dividers must not be installed such that they bound the passageway to a Type III or Type IV exit.

(g) All seats bounding the passageway to a Type III or Type IV exit must be designed to restrain items stowed under the seats to the requirements of FAR 25.561, or a placard must be installed to indicate that no unrestrained baggage shall be stowed under the seats bounding the passageway.

(h) All deployable features (handsets, leg rests, tray tables, etc.) of the structures bounding the passageway to a Type III or Type IV exit must be designed and installed to preclude impeding emergency evacuation, or a placard must be installed to indicate that such features must be stowed for taxi, take-off, and landing.

(i) The additional exit operation placard(s) must be within the normal field of vision of the passengers seated in the exit row.

Rationale

These features are inherited from national requirements and the draft JAA NPA. The group considers that in order to ensure optimum performance of the exit, these should be included in the requirement.

For each proposed change from the existing standard, answer the following questions:

6 - What should the harmonized standard be? [Insert the proposed text of the harmonized standard here]

Replace JAR 25.813(c) and FAR 25.813(c)(1)(i) and (ii) with the following text:

(c) The following must be provided for each Type III or Type IV exit--
(1) There must be access from the nearest aisle to each exit. In addition, for each Type III exit in an airplane that has a passenger seating configuration of 20 or more--
(i) Except as provided in paragraph (c)(1)(ii) of this section, the access must be provided by an unobstructed passageway that is at least 10 inches in width for interior arrangements in which the adjacent seat rows on the exit side of the aisle

containing two seats, or 13 inches in width for interior arrangements in which those rows contain three seats. The width of the passageway must be measured with adjacent seats adjusted to their most adverse position.
At least 10 inches of the required passageway width must be within the required projected opening width of the exit.

(ii) In lieu of one 10- or 13-inch passageway, there may be two passageways, between seat rows only, that must be at least 6 inches in width and lead to an unobstructed space adjacent to each exit. (Adjacent exits must not share a common passageway.) The width of the passageways must be measured with adjacent seats adjusted to their more adverse position. The unobstructed space adjacent to the exit must extend vertically from the floor to the ceiling (or bottom of sidewall stowage bins), inboard from the exit for a distance not less than the width of the narrowest passenger seat installed on the airplane, and from the forward edge of the forward passageway to the aft edge of the aft passageway. The exit opening must be totally within the fore and aft bounds of the unobstructed space.
(2) In addition to the access--
(i) For airplanes that have a passenger seating configuration of 20 or more, the projected opening of the exit provided must not be obstructed and there must be no interference in opening the exit by seats, berths, or other protrusions (including any seatback in the most adverse position) for a distance from that exit not less than the width of the narrowest passenger seat installed on the airplane.
(ii) For airplanes that have a passenger seating configuration of 19 or fewer, there may be minor obstructions in this region, if there are compensating factors to maintain the effectiveness of the exit.

(3) For each Type III exit, regardless of the passenger capacity of the airplane in which it is installed, there must be placards that--
(i) Are readable by each person seated adjacent to and facing a passageway to the exit, in their normal field of view; and one adjacent to or on the exit.
(ii) Accurately state or illustrate the proper method of opening the exit, including the use of handholds; and
(iii) If the exit is a removable hatch, state the weight of the hatch and indicate an appropriate location to place the hatch after removal.

(4) For airplanes with a passenger seating configuration of 41 or more, Type III exit shall be designed such that, when opened, the hatch/door cannot reduce the size of the exit opening and /or adjacent passageways below the required minimum dimensions, nor shall it obstruct the required access to the exit in any way (i.e., a self-disposing or automatic opening hatch).

(5) The seat back of each seat bounding the passageway leading to each Type III or Type IV exit must be restricted in its movement to prevent evacuees from

folding down seat backs to climb over. The seat back must remain in an essentially upright position, i.e. not exceeding 20 degrees rearward and 10 degrees forward from a plane through the seat reference point normal to the floor and normal to the direction in which the occupant faces. The seat back must be capable of maintaining the essentially upright position under loads of up to 668 N (150 lbf) which should be applied horizontally, in each direction of travel, at the top of the seat back structure at the most adverse position relative to its support structure.

(6) The design of all seats bounding the passageways leading to each Type III or Type IV exit must be free from coat hooks and any protrusion which may impede evacuation.

(7) The design and arrangement of all seats leading to each Type III or Type IV exit must be free from any gap which might entrap a foot or other part of a person standing or kneeling on the seat.

(8) Table latch designs of seats adjacent to the passageways leading to each Type III or Type IV exit must be such that inadvertent release by evacuating passengers will not occur.

(9) Movable, quick-change, class dividers must not be installed adjacent to passenger seats at positions such that the dividers would form the boundary of a passageway leading to a Type III or Type IV exit.

(10) All deployable features (handsets, leg rests, tray tables, etc.) of the structures bounding the passageway to a Type III or Type IV exit must be designed and installed to preclude impeding emergency evacuation, or a placard must be installed to indicate that such features must be stowed for taxi, take-off, and landing.

(11) All seats bounding the passageway to a Type III or Type IV exit must be designed to restrain items stowed under the seats to the requirements of FAR 25.561, or a placard must be installed to indicate that no unrestrained baggage shall be stowed under the seats bounding the passageway.

7 - How does this proposed standard address the underlying safety issue (identified under #1)? [Explain how the proposed standard ensures that the underlying safety issue is taken care of.]

The proposed new standard provides specified minimum access, an objective exit design requirement, and other cabin design features to enhance operation and egress. This combination will address the underlying safety issues by providing adequate exit access for a reasonable cross-section of the population, the maintenance of this access throughout the evacuation process, efficient operation

of the exit by design, and additional measures which increase the likelihood of the passengers operating the exit and escaping in an efficient manner.

(Note: The current FAR provides for an equivalent level of safety for a 13 inch access past three seats in the row, instead of the 20 inches required. This is based on the testing that has been conducted by the FAA demonstrating that 13-inch access is equivalent to 20-inch access. The new 13 inch access therefore, technically, reduces the economic burden of the regulation.)

8 - Relative to the current FAR, does the proposed standard increase, decrease, or maintain the same level of safety? Explain. [Explain how each element of the proposed change to the standards affects the level of safety relative to the current FAR. It is possible that some portions of the proposal may reduce the level of safety even though the proposal as a whole may increase the level of safety.]

The proposed change to the FAR increases the level of safety. The FAA has been granting equivalent level of safety findings for interior arrangements in which the adjacent seat rows on the exit side containing three seats 13 inches in width and the centerline of the required passageway width must not be displaced horizontally from the exit more than 6.5 inches. This is the testing that had been conducted by the FAA demonstrating that 13 inch access was equivalent to 20 inch access. The new seat design and placarding requirements will enhance the existing requirements and expedite the evacuation of occupants to the ground in an emergency.

9 - Relative to current industry practice, does the proposed standard increase, decrease, or maintain the same level of safety? Explain. [Since industry practice may be different than what is required by the FAR (e.g., general industry practice may be more restrictive), explain how each element of the proposed change to the standards affects the level of safety relative to current industry practice. Explain whether current industry practice is in compliance with the proposed standard.]

The proposed change increases the level of safety. The FAA has been granting equivalent level of safety findings for interior arrangements in which the adjacent seat rows on the exit side containing three seats 13 inches in width and the centerline of the required passageway width must not be displaced horizontally from the exit more than 6.5 inches. This is the testing that had been conducted by the FAA demonstrating that 13 inch access was equivalent to 20 inch access.

The JAA has been using a hybrid of the FAA and NPA requirements for derivative and newly type certificated airplanes.

The proposed changes will provide a common minimum aisle width standard and the new seat design and placarding requirements will enhance the existing requirements and expedite the evacuation of occupants to the ground in an emergency.

10 - What other options have been considered and why were they not selected?: [Explain what other options were considered, and why they were not selected (e.g., cost/benefit, unacceptable decrease in the level of safety, lack of consensus, etc.) Include the pros and cons associated with each alternative.]

See Attachment 1 and Attachment 2

11 - Who would be affected by the proposed change? [Identify the parties that would be materially affected by the rule change – airplane manufacturers, airplane operators, etc.]

Airplane manufacturers, modifiers and airplane operators would be affected by this change.

12 - To ensure harmonization, what current advisory material (e.g., ACJ, AMJ, AC, policy letters) needs to be included in the rule text or preamble? [Does any existing advisory material include substantive requirements that should be contained in the regulation? This may occur because the regulation itself is vague, or if the advisory material is interpreted as providing the only acceptable means of compliance.]

None.

13 - Is existing FAA advisory material adequate? If not, what advisory material should be adopted? [Indicate whether the existing advisory material (if any) is adequate. If the current advisory material is not adequate, indicate whether the existing material should be revised, or new material provided. Also, either insert the text of the proposed advisory material here, or summarize the information it will contain, and indicate what form it will be in (e.g., Advisory Circular, policy, Order, etc.)]

Current FAA advisory material will not be adequate. New advisory material should accompany the new requirements noted in question 6.

14 - How does the proposed standard compare to the current ICAO standard? [Indicate whether the proposed standard complies with or does not comply with the applicable ICAO standards (if any)]

No specific ICAO standard exists.

15 - Does the proposed standard affect other HWG's? [Indicate whether the proposed standard should be reviewed by other harmonization working groups and why.]

No.

16 - What is the cost impact of complying with the proposed standard [Please provide information that will assist in estimating the change in cost (either positive or negative) of the proposed rule. For example, if new tests or designs are required, what is known with respect to the testing or engineering costs? If new equipment is required, what can be reported relative to purchase, installation,

and maintenance costs? In contrast, if the proposed rule relieves industry of testing or other costs, please provide any known estimate of costs.]

The proposed standard mandates the implementation of a new automatically disposed hatch for Type III exits on new type certified airplane programs. The new standard will require increased engineering, testing and certification costs. Without the benefit of having the actual design, some general assumptions can still be made. Large transport aircraft will have more structure and the design will likely have more mechanisms involved compared to a standard Type III hatch. In addition to the increased structure, design and certification costs, small transport aircraft will likely have an even higher cost due to the limited space available and the requirement to route systems differently compared to existing designs.

17. - If advisory or interpretive material is to be submitted, document the advisory or interpretive guidelines. If disagreement exists, document the disagreement.

None submitted.

18.- -Does the HWG wish to answer any supplementary questions specific to this project? [If the HWG can think of customized questions or concerns relevant to this project, please present the questions and the HWG answers and comments here.]

Yes. The HWG believes there are items that were deemed to be outside of the scope of the WG task but should be reviewed. These items are as follows: Enhanced Passenger Safety Briefing, seat to bulkhead relationship for type III exit access, taxi takeoff and landing vs. in-flight considerations, seat recline, hatch disposition outside, changes to § 25.783, 25.807 and 25.809, exit marking, applicability definition for new airplanes.

19. – Does the HWG want to review the draft NPRM at “Phase 4” prior to publication in the Federal Register?

Yes.

20. – In light of the information provided in this report, does the HWG consider that the “Fast Track” process is appropriate for this rulemaking project, or is the project too complex or controversial for the Fast Track Process? Explain. [A negative answer to this question will prompt the FAA to pull the project out of the Fast Track process and forward the issues to the FAA’s Rulemaking Management Council for consideration as a “significant” project.]

No

FAA Action – Not Available