H. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995, 44 U.S.C. 3501, et seq., all agencies are required to submit to OMB, for review and approval, any reporting requirements inherent in a rule. While employers seeking to establish eligibility for the safe harbor are encouraged to keep a record of their actions, this rule does not impose any additional information collection burden or affect information currently collected by ICE.

List of Subjects in 8 CFR Part 274a

Administrative practice and procedure, Aliens, Employment, Penalties, Reporting and recordkeeping requirements.

Accordingly, for the reasons stated in the preamble to this supplemental final rule, the Department of Homeland Security reaffirms the text of the final rule issued on August 15, 2007, 72 FR 45611, and makes one typographical correction as set forth below:

PART 274a—CONTROL OF EMPLOYMENT OF ALIENS

1. The authority citation for part 274a continues to read as follows:


§ 274a.1 [Amended]

2. In § 274a.1(l)(2)(iii) remove the phrase “(l)(2)(i)(B)” and add in its place the phrase “(l)(2)(i)(C)”.

Michael Chertoff,
Secretary.

[FR Doc. E8–25544 Filed 10–27–08; 8:45 am]
BILLING CODE 9111–28–P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

9 CFR Parts 71, 83, and 93
[Docket No. APHIS–2007–0038]
RIN 0579–AC74

Viral Hemorrhagic Septicemia; Interstate Movement and Import Restrictions on Certain Live Fish

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Interim rule; delay of effective date.

SUMMARY: On September 9, 2008, we published an interim rule in the Federal Register (73 FR 52173–52189) to restrict the interstate movement and importation into the United States of live fish that are susceptible to viral hemorrhagic septicemia, a highly contagious disease of certain freshwater and saltwater fish. That interim rule was scheduled to become effective on November 10, 2008. We are delaying the effective date of the interim rule until January 9, 2009. This delay will provide APHIS with time to consider all comments and make some adjustments to the interim rule that may be necessary in order to successfully implement it.

DATES: The effective date for the interim rule amending 9 CFR parts 71, 83, and 93, published at 73 FR 52173–52189 on September 9, 2008, is delayed until January 9, 2009.

FOR FURTHER INFORMATION CONTACT: Dr. P. Gary Egrie, Senior Staff Veterinary Medical Officer, National Center for Animal Health Programs, VS, APHIS, 4700 River Road Unit 46, Riverdale, MD 20737–1231; (301) 734–0695; or Dr. Peter L. Merrill, Senior Staff Veterinarian, National Center for Import and Export, VS, APHIS, 4700 River Road Unit 39, Riverdale, MD 20737–1231; (301) 734–8364.

SUPPLEMENTARY INFORMATION:

Background

Viral hemorrhagic septicemia (VHS) is a highly contagious disease of certain freshwater and saltwater fish, caused by a rhabdovirus. It is listed as a notifiable disease by the World Organization for Animal Health. The pathogen produces variable clinical signs in fish including lethargy, skin darkening, exophthalmia, pale gills, a distended abdomen, and external and internal hemorrhaging. The development of the disease in infected fish can result in substantial mortality. Other infected fish may not show any clinical signs or die, but may be lifelong carriers and shed the virus.

On September 9, 2008, we published an interim rule in the Federal Register (73 FR 52173–52189, Docket No. APHIS–2007–0038) to amend 9 CFR parts 71, 83, and 93 by establishing regulations to restrict the interstate movement and the importation into the United States of certain live fish species that are susceptible to VHS. We announced that the provisions of the interim rule would become effective November 10, 2008, and that we would consider all comments on the interim rule received on or before November 10, 2008, and all comments on the environmental assessment for the interim rule received on or before October 9, 2008.

Delay of Effective Date

Since publication of the interim rule, we have received comments that address a variety of issues. These issues include the feasibility of the requirement in the interim rule for a visual inspection of regulated fish 72 hours prior to shipment, the provision that Interstate Certificates of Inspection allowing interstate movement of live fish will be valid for 30 days from the date of issuance, and the provision that laboratory testing is valid for 30 days from the date of sample collection for fish held in a water source that is not a secure water source.

Based on our review of the comments received to date, we consider it advisable to delay the effective date of the interim rule from November 10, 2008, until January 9, 2009, while retaining November 10, 2008, as the close of the comment period for the interim rule and October 9, 2008, as the close of the comment period for the environmental assessment. This additional time will allow APHIS to consider all comments and make some adjustments to the interim rule that may be necessary in order to successfully implement it.


Done in Washington, DC, this 22nd day of October 2008.

Kevin Shea,
Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. E8–25663 Filed 10–27–08; 8:45 am]
BILLING CODE 4701–14–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 25 and 121

RIN 2120–AI66

Security Related Considerations in the Design and Operation of Transport Category Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The rule adopts several standards of the International Civil Aviation Organization (ICAO) and requires manufacturers to incorporate certain security features in the design of new transport category airplanes. Specifically, manufacturers of affected
airplanes must design flightdecks that are protected from penetration by projectiles and intrusion by unauthorized persons. The flightdeck, passenger cabin, and cargo compartments of these aircraft must be protected from the effects of detonation of an explosive or incendiary device. The rule also requires that manufacturers of new transport category airplanes design a “least risk bomb location” and that operators of certain existing airplanes designate such a location.

DATES: These amendments become effective November 28, 2008. The Director of the Federal Register approved the incorporation by reference of certain publications listed in this rule as of the November 28, 2008 effective date of this rule.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this final rule, contact: Jeff Gardlin, FAA Airframe and Cabin Safety Branch, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055; telephone (425) 227–2136; facsimile (425) 227–1149; e-mail: jeff.gardlin@faa.gov. For legal questions concerning this final rule, contact: Gary Michel, Regulations Division, AGC–200, FAA Office of the Chief Counsel, 800 Independence Avenue, SW., Washington DC, 20591; telephone (202) 267–3148; e-mail: gary.mich@faa.gov.

SUPPLEMENTARY INFORMATION: Authority for This Rulemaking

The FAA’s authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency’s authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, the FAA is charged with promoting safe flight of civil aircraft in air commerce by prescribing minimum standards required in the interest of safety for the design and performance of aircraft. This regulation is within the scope of that authority because it prescribes new safety standards for the design of transport category airplanes.

I. Background

A. Summary of the NPRM

On January 5, 2007, the FAA published a notice of proposed rulemaking (NPRM) entitled “Security Related Considerations in the Design and Operation of Transport Category Airplanes.” The FAA proposed to amend part 25 to specify design standards for new transport category airplanes in order to increase security for passengers and flightcrew.

For airplanes required by operating rules to have a flightdeck door, the FAA proposed standards to protect the flightdeck from forcible intrusion by unauthorized persons or penetration by small arms fire or fragmentation devices. The NPRM also proposed that airplanes with a certified passenger seating capacity of more than 60 persons or a maximum certificated gross takeoff weight of over 100000 pounds must be designed to limit the effects of an explosive or incendiary device by:

1. Providing means to protect the flightdeck and the passenger compartment from smoke, fumes, and noxious gases.

2. Requiring fire suppression systems for cargo compartments be designed to withstand certain impacts or loads—unless they are either redundant and separated from one another by a specified distance or installed remotely from the cargo compartment.

3. Designating a “least risk bomb location” (LRBL) where a bomb or other explosive device discovered in-flight could be placed, so if it were to detonate, flight-critical structures and systems would be protected from damage as much as possible.

4. Ensuring redundant airplane systems necessary for continued safe flight and landing are either physically separated by a certain distance or otherwise designed to permit continued safe flight and landing in the aftermath of some event.

5. Creating interior features of the cabin that make it more difficult to conceal weapons, explosives, or other such objects and easier to find such items by a simple search.

The FAA also proposed to amend part 121 to require operators of existing airplanes with a passenger seating capacity of more than 60 persons designate a least risk bomb location. The public comment period on the NPRM closed on April 5, 2007.

The NPRM noted the requirements of this rule are not intended to be applied to airplanes operated for private use. Though the FAA specifically sought input, we received no comments on this subject. Since publication of the NPRM, we have also published NPRM 07–132, proposing certain alternative requirements for private use airplanes. We further intend to exclude §25.795 from the final rule that results from the “private use” NPRM. This action is consistent with our previously stated intentions.

B. Summary of the Final Rule

This rule amends part 25 to require manufacturers design certain new transport category airplanes to increase security for passengers and the flightcrew. The rule specifies design standards to protect the flightdeck from forcible intrusion by persons or from penetration by small arms fire or fragmentation devices. It also requires the design provide means to limit the effects of detonation of an explosive or incendiary device by (1) limiting entry of smoke, fumes, and noxious gases into the flightdeck or the passenger cabin; (2) meeting specified standards for all components of fire suppression systems in cargo compartments; (3) establishing an LRBL; (4) physically separating certain redundant airplane systems or otherwise designing them to continue to function in the event of a detonation; and (5) providing interior features that make it harder to conceal weapons, explosives, or other objects and easier to detect such objects by a simple search of the airplane cabin.

This rule also amends part 121 to require operators of certain existing airplanes designate a least risk bomb location.

C. Summary of Comments

The FAA received 31 comments on the proposed rule. Commenters included airplane manufacturers, airlines, aviation associations, and individuals, including students and commercial pilots. Most of the comments supported the proposed rule; several commenters also had suggestions for change.

As provided in the original tasking statement to the Aviation Rulemaking Advisory Committee (ARAC), certain comments we received were referred to the Design for Security Harmonization Working Group. Those comments pertained to the following proposed sections in the NPRM:

1. In §25.795(b)(3)(iii), delete the requirement to withstand “a 6-inch displacement from a single point source applied anywhere along the distribution system because of support structure displacements or adjacent materials displacing against the distribution system.”

2. In §25.795(b)(2), clarify those flight and dispatch regimes under which smoke protection is not required.

3. In §25.795(c)(2), further explain the relation of system separation to several existing regulations.

1 72 FR 630.
2 72 FR 38732, (July 13, 2007).
4. In §25.795(c)(2), explain how measurement of the separation distance is accomplished.
5. In §25.795(c)(3), define an object size to facilitate interior searches.
Comments received on these and other sections of the NPRM are considered in detail in the following discussion of this final rule.

II. Discussion of Final Rule

A. Overview
For more than 50 years, terrorist acts—including hijackings and detonation of explosive devices—have targeted airplanes.

1. ICAO Design Standards To Increase Security

   In response to a number of airplane bombings and hijackings that occurred in the 1960s, 1970s, and early 1980s, the International Federation of Airline Pilots Association developed proposals regarding design standards for increased security in airplanes. The association submitted the proposals to the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations charged with development of international standards for safety and security of civil aviation. ICAO airworthiness standards affecting airplane design are contained in Annex 8 of the Convention on International Civil Aviation. ICAO in turn, solicited comments on the proposals from its member countries and aviation organizations.

   On December 21, 1988, a terrorist’s bomb exploded in mid-air on Pan American World Airways Flight 103 from London to New York City. The explosion in the forward cargo hold of the Boeing Model 747 airplane occurred over Lockerbie, Scotland, killing all 259 people onboard and 11 people on the ground.

   As a result of this catastrophic event, the effort to establish design standards for increased security gained impetus. Within several months of the explosion on Flight 103, ICAO formed a study group called Incorporation of Security into Aircraft Design (ISAD). The study group included representatives of the airworthiness authorities of the United States, the United Kingdom, France, Germany, Brazil, and Russia. Also included were representatives of the International Federation of Airline Pilots Association, the International Coordinating Council of Aerospace Industries Associations, and the International Air Transport Association.

   The task of ISAD was to consider the existing proposals and recommend design standards that were to be incorporated into Annex 8. Ultimately, ISAD recommended design standards pertaining to the following: 1. Survivability of systems, 2. Suppression of fire in cargo compartments, 3. Protection from smoke and fumes in the flightdeck and the passenger cabin, 4. Design of an LRBL, 5. Protection of the flightdeck from penetration by small arms fire or shrapnel, 6. Design of interior features to deter concealment of weapons, explosives, or other objects and facilitate searching for them.

   On March 12, 1997, ICAO adopted the recommended standards as Amendment 97 to Annex 8, and the member countries subsequently approved those standards. All but one of the standards became effective 3 years after their adoption. The exception was the standard requiring identification of an LRBL, which became effective immediately. The identification of an LRBL was already common practice in the aviation industry and had been applied as an operational standard rather than a design standard.

   Generally, Annex 8 standards do not apply directly to the design of an airplane, but are implemented by adoption into the airworthiness regulations of ICAO’s member countries. As a signatory to the Convention which established ICAO, the United States is required to implement the Annex 8 rules into our national airworthiness regulations to the extent practicable.3

   2. ARAC’s Recommendations Pertaining to Design for Security 4

   In addition to participating in the development of international standards through ICAO, a high priority for the FAA is maintaining harmonized standards between the United States and Europe. This harmonization is achieved through the Aviation Rulemaking Advisory Committee (ARAC) composed of 66 member organizations providing extensive knowledge and expertise on a wide range of aviation matters.

   In 1999, the FAA tasked ARAC to propose regulations incorporating security measures into airplane design.5 The proposed regulations were to be based on Amendment 97 to Annex 8. The task was assigned to the Design for Security Harmonization Working Group, incorporating members from the aviation industry and the governments of Europe, the United States, Brazil, and Canada.

   In April 2001, after several airlines reported incidents of flightdeck intrusion by aggressive passengers, the FAA tasked ARAC to propose harmonized regulations to improve the intrusion resistance of the flightdeck.6 This task was also assigned to the Design for Security Harmonization Working Group.

   The working group proposed harmonized regulations for implementing security safeguards into the design of new transport category airplanes. The working group submitted its recommendations to ARAC which voted in favor of submitting the recommendations to the FAA.

   3. Legislation and Rulemaking After the Terrorist Attacks of 9/11

   Several months after the terrorist attacks on September 11, 2001, Congress passed the Aviation and Transportation Security Act. Among other provisions, the Act directed that—for airplanes required to have a door between the flightdeck and the passenger compartment—the FAA issue an order requiring strengthening of the door so that it could not be forced open from the passenger side.7

   On January 15, 2002, the FAA published Amendment No. 25–106.7 The rule amended 14 CFR 25 to add new §25.795, Security considerations. Paragraph (a) Protection of flightdeck specified that, if a flightdeck door were required by operating rules, the door installation must resist forcible intrusion by unauthorized persons and penetration by small arms and fragmentation devices. The rule also amended 14 CFR 121 to specify a date the required flightdeck door was to be installed. Thus, the amendment addressed only the ICAO standard regarding protection of the flightdeck.

B. Withdraw or Defer Rule

   Two commenters, Boeing and the Air Transport Association of America (ATA), argued that this rulemaking was premature and recommended it be withdrawn or deferred for the reasons stated below. Because of the nature of the comments, the FAA consulted with

3 Because we have not yet incorporated these ICAO standards into our regulations, the United States (like all other states of manufacture) has filed “differences” with ICAO regarding the design for security provisions of Annex 8. Adoption of this final rule removes these differences with the ICAO standards.
4 The FAA formally established the Aviation Rulemaking Advisory Committee on January 22, 1991, to provide advice and recommendations about FAA’s safety-related rulemaking (56 FR 21990).
5 64 FR 57921, (October 27, 1999).
6 66 FR 31273, (June 11, 2001).
7 67 FR 2118.
the Transportation Security Administration (TSA). The following discussion represents consensus of the FAA and TSA regarding recommendation to withdraw or defer the proposed rule.

1. Coordination With Other Agencies

Boeing and ATA contend the proposed rule was not properly coordinated with agencies that regulate aviation security issues. As was noted in the preamble to the NPRM, in October 1999 the FAA formed a Design for Security Harmonization Working Group under the auspices of ARAC. The task of the new working group was to propose harmonized regulations incorporating security measures into airplane design. The proposed regulations were to be based on ICAO’s Amendment 97 to Annex 8. At that time, the TSA had not yet been formed. However, its predecessor organization within the FAA was a part of ARAC. Subsequently, when TSA was established as a separate agency, it continued to participate in ARAC.

After the FAA accepted ARAC’s recommendations regarding harmonized regulations, we coordinated with TSA throughout the process of drafting the NPRM. This close coordination continued during the extensive governmental review prior to publication of the NPRM. In fact, Homeland Security Presidential Directives (HSPD), the Aviation Transportation System Security Plan (ATSS), and the National Strategy for Aviation Security all stress that aviation security measures should be fully coordinated among the relevant governmental agencies, and coordination of this rule was consistent with that approach.

2. Compliance With Certain HSPDs or With the National Strategy for Aviation Security

Boeing and ATA stated that another reason to withdraw or defer the rule is it does not comply with Homeland Security Presidential Directive 16 (Directive 16) or with the National Strategy for Aviation Security.

This is a more complex issue. Directive 16, issued in June 2006, mandates creation of a National Strategy for Aviation Security (the Strategy), which in turn is implemented through several security plans. The Strategy was issued on March 26, 2007, more than two months after publication of the FAA’s proposed rule. Subsequently, the FAA and TSA reviewed the Strategy and its corresponding plans and concluded that this rule does not conflict with those documents. The ATSS notes:

The FAA also has specific responsibilities and authorities relating to safety and security of critical National Airspace System infrastructure, as well as responsibility for providing technical advice and regulatory certification for aircraft-based attack countermeasures. The Strategy identifies terrorism and attacks directed at aircraft and their occupants as the number one threat to aviation security. This rule is consistent with the role of the FAA, as contemplated by the ATSS, because it regulates the design and manufacture of certain airplane countermeasures to protect the airplane and its occupants.

3. Risk Analysis of the Proposed Approach and Alternatives

In their comments, ATA and Boeing also recommended the NPRM be subject to a formal risk analysis to assess its merits compared to alternative aviation security measures. In particular, they urged that TSA’s Risk Management Analysis Tool (RMAT), which is part of the Risk Management Analysis Process (RMAP), be used to assess the proposal. The commenters suggested that because the NPRM was not based on a risk assessment it may duplicate or needlessly overlap other security measures.

A formal risk analysis tool, such as RMAT, was not available when the NPRM was developed. The ARAC supported the measures proposed in the NPRM, based on a real threat to aviation, and concluded the proposed measures would reduce the risk associated with future attacks. The principles that underlie the proposed security measures have their origins in work done by the international aviation community dating back to the 1980s and are based on the concept of layered security. This is an integrated approach which relies on multiple layers of security measures, including pre-travel measures, checkpoint measures, and aircraft design measures to provide increased protection from terrorists and weapons.

Further, RMAT is a tool which is still under development and requires further testing. Given the continuing threat of attacks by terrorists, the FAA cannot justify delays in issuing this rule to analyze it with a tool that has not yet been validated. New tools for risk analysis are developed constantly, and if we wait for the next best tool, no regulatory improvements would occur. Based on discussion with TSA, we considered whether to use something other than the RMAT to address the comments from Boeing and ATA. FAA and TSA concluded that this wasn’t feasible or necessary. First, there is really no other suitable risk model available to address this type of rule. Second, risk methodologies utilized by TSA and other agencies whose purview is security provided the outside intelligence on which FAA relied (beginning with ICAO standards) to determine that the threat of terrorist acts was significant and mitigation through airplane design was prudent and appropriate. All of the data available, including some that is classified, clearly show this rule would provide benefit. Regulatory decisions are based on the best information available at the time. Therefore, the FAA is amending parts 25 and 121, as proposed, with the modifications discussed below.

C. Applicability

As proposed, § 25.795(a) would apply to new transport category airplanes which are required by operating rules to have a flightdeck door. Sections 25.795(b) and (c) would apply to new transport category airplanes with a maximum certificated passenger seating capacity of more than 60 persons or a maximum certificated takeoff gross weight of over 100,000 pounds. Section 121.295 would apply to existing transport category airplanes with a passenger seating capacity of more than 60 persons.

1. Rule Should Apply to All Transport Category Airplanes

Four commenters, including the Air Line Pilots Association, Coalition of Airline Pilots Associations, Passenger-Cargo Security Group, and an individual suggested the proposed rule apply to all transport category airplanes and not be limited, based on passenger capacity or maximum takeoff gross weight. The commenters cited the large number of airplanes in the fleet that are below the proposed thresholds, sizable passenger and cargo loads carried, threat the airplanes would present if commandeered and used as weapons, and the desire to apply aviation security measures uniformly.

As we discussed in the preamble to the NPRM, the intent of the proposed rule was to adopt security provisions in design that will be effective and at the same time practicable. Limiting the rule to the appropriate aircraft was a key task of the Design for Security Harmonization Working Group. In fact, as a result of the ARAC recommendation and the position of its member states, ICAO amended the applicability section of its standards to specify a similar applicability. We discussed this matter with the TSA and concluded that applying the proposed
rule to all transport category airplanes would add considerable complexity to the design and certification of smaller airplanes without measurably improving security.

In addition, if operating rules require an airplane to have a flightdeck door, then—regardless of that airplane’s size—the requirements for the flightdeck bulkhead will apply. This aspect of the proposal most directly addresses use of the airplane as a weapon, which was presented as the major concern of the commenters.

The applicability of the majority of the provisions of § 25.795 is governed by passenger capacity and gross weight. In the NPRM, we stated both criteria are necessary to address airplanes of significant size that could carry both passengers and cargo, but be below the passenger threshold alone. Clearly, the intent was to capture airplane types of a certain size, whether or not they were carrying large numbers of passengers.

In reviewing the language in the rule, we noted the terminology used to define passenger capacity limits (“certificated passenger seating capacity”) might not be sufficiently clear. The word “capacity” suggests the limit of the airplane’s capability. However, there could be some confusion whether this applies to each individual airplane or to the airplane type. As discussed above, we clearly intended to affect the airplane type. Therefore, to clarify the intent, the word “maximum” has been added to paragraphs (b) and (c) of § 25.795 as well as § 121.295. This is also consistent with the language used to characterize the gross weight limits.

2. Rule Should Also Apply to Airplanes Which Carry Only Cargo

Several commenters, including the Airline Professionals Association (APA), Air Line Pilots Association (ALPA), and Coalition of Airline Pilots Associations (CAPA) recommended the proposed requirements should also apply to all-cargo airplanes. The commenters specifically cited the physical protection of the flightdeck as something that should be required on all-cargo airplanes as well as on passenger airplanes. Their concern is cargo airplanes frequently operate from airports that do not have passenger screening facilities and can be used as weapons as effectively as airplanes which carry passengers.

Existing requirements for reinforced flightdeck doors address all transport category airplanes required by operating rules to have a flightdeck door. This rule extends the same requirements to the rest of the flightdeck bulkhead and other barriers, but does not change the applicability of those requirements from a security standpoint. The need to reinforce the flightdeck door or, in fact, the need to have a flightdeck door depends on restrictions on access to the airplane. We have discussed this issue with TSA and concluded that a suitable screening program to restrict access to the airplane is as effective as physical protection of the flightdeck without a rigorous screening program. This subject was discussed in detail in Amendments 121–287 and 129–37, Flightdeck Security on Large Cargo Airplanes, and the rationale in those rules continues to be applicable.

3. Rule Should Apply to Existing As Well As New Airplanes

Several individual commenters recommended the proposed requirements be applied to existing airplane models, rather than only new type designs.

As discussed in the NPRM, existing airplanes are already equipped with reinforced flightdeck doors and LRBLs that were established voluntarily. The remainder of the proposed changes involve design changes that are significant for an existing airplane type. The costs of making these design changes would be very significant, and the benefits would not balance the cost. When developing the proposal, we considered various methods of implementation and concluded that introduction of these requirements on new type designs would be the only approach where benefits outweigh the costs. We have no plan to extend any of these requirements to the existing fleet or existing type designs. An airplane’s certification basis is established in accordance with 14 CFR 21, and that will continue to apply in this case. With the exception of the change to § 121.295, only airplanes with this amendment in their certification basis will be covered by this final rule.

D. Secondary Barriers To Protect Flightdeck

Several commenters, including the CAPA, ALPA, Passenger-Cargo Security Group, and several individuals recommended the FAA require secondary barriers to provide enhanced security of the flightdeck. ALPA cited operational advantages of a secondary barrier when the flightdeck door must be opened during flight. The Passenger-Cargo Security Group argued that while the reinforced flightdeck door is an effective deterrent when it is closed and locked, its effectiveness is compromised with the number of times it is opened during flight. Therefore, the Group recommended that aircraft have a complementary security system and corresponding procedures.

Adding a requirement for secondary flightdeck barriers to this rule would be beyond the scope of the notice, since we did not propose or even discuss this issue in the NPRM. Therefore, if we were to conclude that secondary barriers should be required, we would have to issue another proposal and provide for public comment before adopting such a requirement. In any case, we would need the input of TSA and other agencies to determine whether security concerns warrant such a requirement. Presently, we do not anticipate any rulemaking that will require installation of secondary flightdeck barriers.

Finally, installation of secondary flightdeck barriers is currently permitted provided all airworthiness requirements are met and associated operational procedures are approved. As mentioned in the comment from ALPA, at least one major domestic carrier has developed, acquired approval for, and installed secondary barriers on a portion of its fleet. In addition, operators have established procedures to permit opening of the flightdeck door, and these are working well.

E. Protection of Flightcrew Compartment

As proposed, § 25.795(a) would specify standards for the design of the bulkhead, flightdeck door, and “any other accessible barrier separating the flightcrew compartment from occupied areas.”

1. Use of terms “Barrier” and “Boundary”

The International Coordinating Council of Aerospace Industries Associations (ICCAIA) pointed out that the proposed rule refers to “the bulkhead, door, and any other accessible barrier separating the flightdeck compartment from occupied areas,” whereas the proposed Advisory Circular uses the term “boundary.” In the context of the NPRM, we used the term “barrier” to indicate the function required. In the context of the Advisory Circular, we used the term “boundary” to help define those items that must serve as barriers. However, we agree the distinction is subtle and the term “boundary” is more general. Therefore, this final rule uses the term “boundary” rather than “barrier” to refer to structures which separate the flightdeck from the passenger compartment.
2. Meaning of Term “Accessible” Barrier or Boundary

Boeing, Bombardier, and the ICCAIA requested clarification of the term “accessible” barrier (now accessible boundary). In the context of resistance to intrusion into the flightdeck, a boundary is accessible if it could be exposed to loads from attempts at forcible intrusion. If the flightdeck bulkhead is either composed or installed forward of other interior structures, such as a galley or closet, the contribution of those interior structures to intrusion resistance may be included when assessing the acceptability of the boundary.

Boundaries on a multi-deck airplane could include the floor or ceiling, although the ceiling might not be accessible if it is high off the floor. Generally, physical intrusion through the cabin ceiling (from below the flightdeck) would not be feasible because of the flightdeck floor structural requirements that must already be met. When the cabin is above the flightdeck, the cabin floor is clearly accessible. However, it is also likely the existing structural requirements for the floor will not permit intrusion through the flightdeck ceiling.

In terms of the ballistic protection provided by a barrier, accessibility has a slightly different definition. Barriers are accessible, if they are on a hazardous trajectory (as defined in proposed AC 25.795–2) from a location accessible to a passenger. Interior structures installed aft of a bulkhead would probably not provide much ballistic protection. Floors and ceilings on multi-deck airplanes will very likely require protection.

When establishing a hazardous trajectory, an applicant for a new type certificate should consider trajectories originating in areas beyond the main cabin seating zones if a passenger has access to them. Such areas would include any compartment that is not locked. Crew rest compartments accessible from the cabin should be evaluated if they are not locked or do not have some other means of physically preventing unwanted access. This applies even though they are intended only for crew use.

3. Placards To Restrict Entry

An individual commented that placards on the compartment stating “crew use only” would be sufficient. We do not agree. While a placard might discourage a would-be intruder by a person, it would not prevent entry by a person deliberately trying to gain access. Therefore, an area of the cabin, including a compartment not on the main deck, is “accessible” unless there is a physical impediment, such as a lock, to entry.

F. Flightdeck Smoke Protection

As proposed, § 25.795(b)(1) would require that means be provided to limit entry of smoke, fumes, and noxious gases from any other area of the airplane into the flightdeck.

1. Applicability of §§ 25.831 and 25.855

Boeing commented that the preamble to the NPRM says that § 25.831 addresses removal of smoke from the flightdeck but does not directly address penetration of smoke into the flightdeck, other than smoke originating in a cargo compartment. According to the commenter, this statement incorrectly implies that § 25.831 contains a requirement pertaining to smoke penetration, and it does not.

We agree that the preamble was misleading on this point. Section 25.831 addresses removal of smoke from the flightdeck but does not address penetration of smoke from cargo compartments. It is § 25.857 that addresses excluding hazardous quantities of smoke from a fire in a cargo compartment from the flightdeck or passenger compartment. This matter is clearly addressed in the background section of proposed AC 25.795–3, therefore no change is needed to this final rule or the Advisory Circular.

2. Clarification of References to Advisory Circular 25–9A

Boeing and Transport Canada cited several places in the preamble of the NPRM where reference to AC 25–9A could be misinterpreted and might not be sufficiently precise. We agree that the preamble did not completely characterize the criteria provided in AC 25–9A and the relationship of that AC to these requirements. Advisory Circular 25–9A covers guidance for testing of smoke penetration and removal as well as recommended methods of compliance with §§ 25.854, 25.855, 25.857, 25.858, and 25.869. Clearly, AC 25–9A does not explicitly address the requirements of § 25.795, since they did not exist at the time the Advisory Circular was issued. Therefore, any use of the guidance in AC 25–9A in the context of § 25.795 will require adaptation appropriate for the specific requirements of this final rule. Nonetheless, some of the recommended procedures described in AC 25–9A are directly applicable to procedures that could be used to show compliance with § 25.795.

3. Airflow Settings and Dispatch Conditions

As discussed earlier, the FAA requested in the original tasking statement for ARAC that certain comments be addressed by the Design for Security Harmonization Working Group. Among them were comments regarding protection of the flightdeck from smoke penetration. In particular, Boeing and Transport Canada proposed opposite approaches to addressing the portions of a flight and the dispatch conditions when the capability to resist smoke penetration into the flightdeck should be required. Since both organizations were part of the working group, we referred the matter to the working group for a recommendation.

The intent of the requirement is that the airplane be capable of limiting smoke penetration into the flightdeck when an explosive or incendiary device has been discharged elsewhere on the airplane. We recognize that, at any given moment, the airplane may not be making use of that capability. However, once the crew becomes aware of the need to prevent smoke penetration, they should be able to take action in a fairly short time. This is discussed further in proposed AC 25.795–3. With regard to dispatch conditions, the conclusion of ARAC is that manufacturers should consider the systems that will be permitted to be inoperative for dispatch when showing compliance with this requirement. This also is noted in the Advisory Circular.

Transport Canada commented that the method of compliance discussed in the preamble and the Advisory Circular—providing small differential pressure between the flightdeck and other areas—might not be reliable without tests. The commenter concluded that analysis alone would not be acceptable to show compliance.

The FAA agrees that testing is necessary as part of the certification process, assuming that the differential pressures are very small. As noted in proposed AC 25.795–3, small differential pressures are difficult to predict analytically and often cannot be measured directly. Once an applicant for a new type certificate conducts tests, the FAA may agree that subsequent changes to the design could be substantiated by analysis alone if the prior test data remain valid. But we agree that in order to establish whether a small differential pressure actually exists, a simple test will most likely be

4. Allowable Flightdeck Smoke

Boeing also proposed language that would state explicitly that the rule does not prohibit penetration of any smoke into the flightdeck in the immediate aftermath of an event.

The FAA does not believe that any further clarification is required outside this discussion. Both the NPRM and this final rule use the term “limit” rather than “prevent” when discussing penetration of smoke into the flightdeck. Additionally, proposed AC 25.795–3 clearly states that smoke resulting from detonation of an explosive or incendiary device “may initially enter the flightdeck, until the flightcrew initiates action to prevent further entry of smoke.”

G. Passenger Cabin Smoke Protection

As proposed, § 25.795(b)(2) would require that means be provided to prevent incapacitation of persons in the passenger cabin resulting from smoke, fumes, and noxious gases.

1. Airflow Settings and Dispatch Conditions

Boeing and Transport Canada addressed the proposed requirements pertaining to protection of the passenger cabin from smoke. As with protection of the flightdeck from smoke, the comments addressed airflow settings and dispatch conditions related to passenger cabin smoke protection. These comments were also referred to ARAC for a recommendation.

The purpose of this requirement is that the airplane have the capability of coping with a quantity of smoke and other toxic gases in the passenger cabin, such that the passengers are not incapacitated. A straightforward method of compliance is to change cabin air rapidly with outside air. This rapid air change may not be possible in all configurations of the environmental control system or all flight regimes. In fact, the need to rapidly evacuate smoke from the passenger cabin is an emergency procedure for which a change in the ventilation rate may be required. Thus, the crew may need to initiate some procedures to enable the airplane to meet the required air change rate. This is discussed in more depth in proposed AC 25.795–4. No change is made to this final rule since the rule simply requires “means” to protect the passengers.

2. Use of Term “Fresh Air”

The NPRM discusses rapid air change using fresh air as one way to comply with this requirement under § 25.795(b)(2). Boeing and Transport Canada questioned whether using the term “fresh air” was strictly accurate. Boeing suggested using the term “outside air” which is more descriptive of our intent.

The FAA agrees that the word “fresh” can have implications about air quality and that the quality of outside air is beyond the control of the applicant for a new type certificate. Using the term “outside air,” does not have the same implications about air quality. When showing compliance with this requirement by using rapid air changes, the key factor is that the air is not re-circulated and originates from the outside. Therefore, in the preamble of this final rule, the discussion of rapid air change refers to “outside air.”

We also noted that the proposed rule language could be interpreted as requiring consideration of constant gas concentrations, rather than initial gas concentrations. While the preamble discussion of acceptable methods of compliance, as well as the characterization of the hazard, are clear that the initial concentrations of specific gases must be addressed, there is a potential for confusion. To make sure there is no misunderstanding, the word “initial” is added in paragraph b(2), as follows: “Means must be provided to prevent passenger incapacitation in the cabin resulting from smoke, fumes, and noxious gases as represented by the initial combined volumetric concentrations of 0.59% carbon monoxide and 1.23% carbon dioxide.”

H. Cargo Compartment Fire Suppression

As proposed, § 25.795(b)(3) would require all components of fire suppression systems for cargo compartments be designed to withstand certain conditions, unless the systems are either redundant and separated in accordance with proposed § 25.795(c)(2) or installed remotely from the cargo compartment.

1. Protection From Chemical and Biological Hazards

The CAPA recommended that the requirements address chemical and biological hazards in addition to the effects of an explosive or incendiary device.

While there are no doubt valid security concerns associated with these potential situations beyond the scope and intent of this final rule. The rule, as proposed, addressed mitigating effects of explosive and incendiary devices from an engineering standpoint. Chemical or biological threats introduce entirely different issues and potential consequences. Should such threats warrant consideration in the airplane design, further rulemaking would be necessary. Accordingly, the FAA has made no change to this final rule.

2. Six-Inch Displacement of Components

Boeing and Bombardier questioned the requirement that all components of the cargo compartment’s fire suppression system be able to withstand “A 6-inch displacement in any direction from a single point force applied anywhere along the distribution system because of support structure displacements or adjacent materials displacing against the distribution system.” Bombardier noted that this would seem to require a sphere with a diameter of 12-inches of space around each point along the distribution system. Boeing stated that certain parts of the airplane structure cannot displace 6 inches without failure or the distribution system would move with the structure, so that there would be no relative displacement.

These comments were referred to ARAC for consideration, and the committee’s recommendations form the basis of this discussion. The 6-inch displacement criterion is not intended to require free space surrounding the distribution system. The intent of § 25.795(b)(3)(ii) is to provide sufficient flexibility that 6-inch displacements can be tolerated without failure.

The space available for displacement will obviously change in the event of an explosion. Similarly, the fact that certain structures cannot deform 6 inches without failure does not eliminate the potential for a relative displacement between the system and its supporting structure. Relative displacement can occur due to direct loading or secondary contact with adjacent materials or a combination of the two. This can occur irrespective of any structural failure and is a transient condition that is not readily analyzed. The intent of the criterion was to provide a straightforward standard that did not require extensive analysis or knowledge of a particular device.

Nonetheless, the FAA agrees that the proposed criterion could require consideration of unrealistic situations and would not contribute to safety. Therefore, this final rule addresses those situations as follows: No change to the installation of systems near the fuselage contour, for example, in the crown of the airplane
for a main deck cargo compartment. In this area, a system could not be displaced beyond the contour of the fuselage, since the fuselage skin itself will not significantly deflect without failure. In those cases, the maximum displacement in the direction of the fuselage skin can be limited to that which would result in displacement outside the fuselage contour.

2. Similarly, the direction of potential displacement may be constrained somewhat since the explosive or incendiary device is assumed to be within the cargo compartment. The proposed criterion would have resulted in consideration of a displacement in any direction. However, considering the direction of loading that would result from an explosion within the compartment, there are some directions of displacement that are very unlikely.

Therefore, we have deleted the words “any direction” from this final rule, giving the applicant for a new type certificate the ability to propose how the system could be displaced. We expect the envelope of displacement to be no less than a hemispherical shape of a 6-inch radius in the direction away from the cargo compartment (except where limited by the fuselage contour, as noted above.)

3. Finally, there may be installations where the potential for relative displacement between the distribution system and the structure to which it is attached is eliminated. This would not apply to attachments involving standoffs or hanging brackets but could apply to more substantial structure. An example of such structure is a continuous attachment to a floor beam, such that the floor beam would have to fail in order to create a relative displacement with the distribution system. In that case, the locations where a relative displacement could occur would be more limited, and the necessary flexibility could be focused into those areas.

This approach does not address all possible scenarios but is in keeping with the intent of the requirement to enhance survivability of the system through reasonable and practicable measures. Advisory Circular 25.795–5 has also been updated to reflect the change in rule language and the discussion above.

3. All-Cargo Airplanes

The APA, ATA, and CAPA all questioned how the proposed requirement would apply to all-cargo airplanes that do not have an active fire suppression system installed. They expressed concern that the rule might eliminate the current approach to fire protection for all-cargo airplanes and require the installation of a fire suppression system. Such a system would have to be quite large and contain a large amount of extinguishing agent. ATA noted that the cost of certification, installation, and maintenance of a fire suppression system on all-cargo airplanes is not accounted for in the initial regulatory evaluation.

This final rule refers to “an extinguishing agent” but does not require installation of an active fire suppression system for all-cargo airplanes, assuming the existing method of fire suppression is available. In most cases, fire suppression on all-cargo airplanes involves oxygen starvation, rather than application of an extinguishing agent. Depressurization at altitude will reduce the available oxygen and cause the fire to be suppressed. Since this method should continue to be available if an explosive or incendiary device were to detonate, an additional fire suppression system would not be necessary.

This approach is in contrast to that used in Class B cargo compartments sometimes used on combination passenger-and-cargo airplanes that require a person to enter the compartment to combat the fire. After an explosion in the cargo compartment, having a person enter the compartment would be neither an acceptable nor a reliable method of fire suppression. The fire detection system in the cargo compartment of an all-cargo airplane is effectively the same as the fire detection system in the cargo compartment of a passenger airplane. Therefore, this rule should have little effect on most all-cargo airplanes.

4. Eliminate Class B Cargo Compartment on Affected Airplanes

With respect to Class B cargo compartments, Embraer suggested that it would be more clear and direct to simply eliminate them from airplanes covered by this proposal. This suggestion has merit; however, there is other rulemaking activity that specifically addresses standards for Class B cargo compartments. The FAA believes that the effects of this final rule and the results of that rulemaking need to be considered together. A future Class B cargo compartment might not require entry into the compartment to fight a fire. In that case, the regulations would have to be amended to permit the use of Class B compartments. Therefore, we have not changed requirements or modified the cargo compartment classifications in this final rule.

5. Remove First Sentence of § 25.795(b)(3)

Embraer also commented that the first sentence of § 25.795(b)(3) (“An extinguishing agent must be capable of suppressing a fire.”) should be removed because it is redundant to requirements specified in § 25.857(c)(2). In addition, in proposed AC 25.795–5, there is a stated “assumption” that “the system will extinguish the fire.”

We agree; however, the requirements of § 25.795(b) pertain specifically to the effects of explosive and incendiary devices which are not covered in § 25.857 and, in fact, are addressed only in § 25.795(b)(3). Since the assumption in proposed AC 25.795–5 is based on the regulatory requirement (§ 25.795(b)(3)), lacking the benefit of a supporting requirement in the rule, the assumption in the Advisory Circular may not be valid. Therefore, we have made no change to this final rule.

6. Protecting Pressure Vessels and Certain Other Equipment

The APA and CAPA questioned the impact criteria for protection of pressure vessels and other equipment vulnerable to fragment damage. They believe that the fragment velocities are much too low and should be on the order of the measured blast wave velocity of an explosive itself.

There may be some confusion as to what the requirements represent in terms of the threat. The purpose of the proposed requirement to protect against a half inch aluminum sphere traveling at 430 feet per second is to account for objects that fragment and are dispersed as a result of an explosive or incendiary device. While the fragment velocities of the explosive or incendiary device itself may reach very high levels, these are not a hazard to the airplane systems. Much of the work done to establish these criteria involves sensitive information and may not be released to the public. The impact criteria were discussed and agreed upon within ARAC, but security considerations preclude further detailed discussion in this rule. The FAA has considered the issues presented by the commenters and concluded that the criteria remain valid.

I. Least Risk Bomb Location

As proposed, § 25.795(c)(1) would require that an airplane be designed with a designated location where a bomb or other explosive device could be moved to protect flight-critical structural and systems as much as possible from damage in the case of detonation.
1. Language of § 25.795(c)(1)
   Boeing suggested § 25.795(c)(1) be reworded to read, “An airplane should be designed with a designated location or other mitigation for a bomb * * *.” Boeing argued that the wording in the NPRM goes beyond the intent of the ARAC recommendation and that its own suggested wording provides more flexibility.

   Section 25.795(c)(1) is consistent with the ARAC’s recommendation. Additionally, the FAA believes that use of the word “should” is inappropriate in this context, as it conveys a recommendation rather than a requirement. Finally, the rule is flexible to the extent that a “location” is very general and permits a number of different approaches within the airplane. Approaches that do not fall under the definition of a “location” may be approvable, using the equivalent level of safety provisions of § 21.21(b)(1).

2. The Fuel System Is a Critical System
   Transport Canada noted that one of the critical systems that should be kept away from the LRBL is the fuel system.

   The FAA agrees that fuel systems are critical systems, as intended by this final rule. We will add fuel systems to the discussion in proposed AC 25.795–6.

J. Survivability of Systems
   As proposed, § 25.795(c)(2) would require that redundant airplane systems necessary for continued safe flight and landing either be designed to maximize their ability to survive an event or be physically separated by a certain distance, except where that is impracticable. The NPRM proposed that redundant systems be separated by the diameter of a sphere and specified a formula for calculating that diameter.

1. Clarification of System Separation Requirement
   Boeing and Airbus requested clarification on the portions of the airplane to which the system separation requirement applies: when must an applicant consider the entire spherical volume defined in the regulation and when is some lesser volume acceptable. In particular, Airbus proposed that the floor and ceiling of the passenger cabin be treated like the cargo compartment liner with only half the sphere applied to those areas.

   The requirement applies to the entire fuselage, except where impracticable and where limited by the boundary of the bulkheads in the passenger and cargo compartments. As recommended by ARAC, the separation requirement is to be applied in full above the passenger ceiling, which is an area often used to route critical systems. Significant discussion of the rationale for this requirement in the final rule is contained in both the preamble to the NPRM and in proposed AC 25.795–7.

2. Purpose of System Separation
   Boeing and Embraer addressed the purpose of system separation. Boeing suggested that the final rule explicitly state that the purpose of the requirement is to address an explosive or incendiary device. Conversely, Embraer suggested that the rule clarify that an explosive or incendiary device is only an example of something that system separation will help to mitigate.

   While the impetus for the system separation requirement is related to security, the requirement will have benefits that extend beyond security. We do not believe a revision to regulatory language is needed; there is no implication that the requirement is contingent on a specific threat. The extent to which the requirement caters to security issues is addressed by the “impracticable” provisions and the limits on application of the sphere beyond the bulkheads in the passenger and cargo compartments.

3. Possible Conflict With Other Applicable Regulations
   Boeing and Airbus commented that there are other regulations, such as §§ 25.729(f) and 25.903(d), that also require system separation, and promulgation of § 25.795(c)(2) could create conflict.

   This is another subject addressed by the ARAC. The current requirements for system protection against high energy rotor failure or tire bursts are often met by system separation or shielding. In some cases, the traditional approach of system isolation to address a tire burst, for example, could result in both parts of a redundant system running within the required sphere size for compliance with § 25.795(c)(2).

   However, after consultation with ARAC, we cannot envision a scenario in which compliance with either §§ 25.729(f) or 25.903(d) would preclude compliance with § 25.795(c)(2). Nonetheless, if such a situation were to arise, the provision in the regulation regarding impracticability would apply, and the applicant for a type certificate would show compliance with the regulation producing the conflict.

4. Combination of Systems Assumed To Be Inoperative
   Boeing objected to the discussion of the combination of systems assumed to be inoperative within the sphere. The NPRM advised a manufacturer to consider the effect on continued safe flight and landing and whether primary and backup controls for particular systems should be separated relative to another system’s primary and backup controls, essentially so that not only backup controls were available.

   The intent of this discussion was to include an assessment of the effects of the system separation approach in addition to the literal geometric compliance of the system locations. That is, each system taken individually is sufficiently redundant to permit continued safe flight and landing, if there is a failure.

   However, assuming a failure renders a combination of systems inoperative, with the proper separation, there should be sufficient control to permit continued safe flight and landing. Assuming entirely redundant systems, the separation alone will address the concern. Even if the systems are not 100% redundant, the capabilities of the backup system may be such that there is no concern with continued safe flight and landing. Nonetheless, the manufacturer should consider the ramifications of the inoperative systems and the capability of the systems that remain when complying with this requirement.

5. Other Mitigation Measures
   Airbus commented that the rule should make it clear that other mitigation measures are required if system separation is impracticable. They note that the phrase “or otherwise designed to maximize their survivability” is intended to address this but believe that the wording could be more explicit. They suggested dividing paragraph (c)(2) into two paragraphs, to read as follows: “i. Except where impracticable, redundant airplane systems necessary for continued safe flight and landing must be physically separated, at a minimum, by an amount equal to a sphere * * *. The sphere is applied everywhere within the fuselage limited by the forward bulkhead, the aft bulkhead, and the liner of the passenger cabin and cargo compartment, beyond which only one-half the sphere is applied to ‘ii. Where compliance with paragraph (i) above is impracticable, other design precautions must be taken to maximize the survivability of those systems.”
We agree with the comment, inasmuch as it makes the requirement clearer. Accordingly, the language has been changed in this final rule.

6. Clarification Regarding Reliability and Redundancy

Airbus also commented that it would like the preamble to state more definitively that this requirement does not change the reliability requirements of any system or require systems that are not currently redundant to become redundant. Both of these statements are correct, although there is no change needed to the rule language. This final rule adds a requirement to the system architecture (i.e., separation) but does not change the functional requirements of the systems affected. Proposed AC 25.795–7 will reflect this intent.

7. Clarification of How To Measure Separation of Systems

Boeing also asked for a more specific definition of how the separation distance was to be measured. Since the affected systems themselves have physical dimensions, the separation between them may not be a simple distance between points.

Due to the variety of possibilities and the number of different system types, we asked ARAC to address this comment as well. The ARAC concluded and we agree that the distance should be determined so that the sphere derived from the equation in § 25.795(c)(2) can pass between any part of the systems. Proposed AC 25.795–7 has been revised to reflect this same approach.

K. Clarification of § 25.795(c)(3)

As proposed, § 25.795(c)(3) would require that certain parts of the cabin be designed to make it more difficult to hide weapons, explosives, or other objects and easier to search for them. The specific parts of the cabin are the areas above the overhead bins, the toilets, and the life preservers or the areas where they are stored.

The ICAIA, Bombardier, and Airbus all requested clarification on the degree to which the area above stowage compartments must prevent concealment of an object. In particular, they asked about the size of the object to be considered and how the acceptability of the design would be assessed. This is a subject that had initially been discussed in ARAC’s Design for Security Harmonization Working Group but was not resolved. However, because of the evident need for a standard, we referred this comment to the working group for its recommendation.

The working group reached consensus on an approach for the interior design that should simplify the compliance findings. Although Boeing provided a dissenting opinion, the Transport Airplane and Engine Issues Group concurred with the working group and forwarded the recommendation to the FAA. In summary, the working group recommended an approach using objects of varying shapes that have a volume of 20 cubic inches or larger. A designer that elects to use this approach would have a straightforward way of showing compliance. This method is described more fully in AC 25.795–8. Nevertheless, since the commenters requested additional clarification, we have decided to add a provision defining a method of compliance that will always be found compliant, for designs that prevent concealment of 20 cubic inch objects. The rule also permits other methods acceptable to the Administrator. This would include other approaches using standard objects, as well as design features to eliminate the space above the overhead bins. Designs that prevent concealment of objects smaller than 20 cubic inches would, of course, also be acceptable.

The requirements of § 25.795(c)(3) are intended to facilitate searching and are a way to improve the design to that end. The actual search process and the type of things for which a search is conducted are not changed by this requirement. By improving the design and making it easier to search, the search is more effective and more efficient. That should not affect operators when an airplane is searched, other than making the search more effective and efficient as noted above. It is simply a way to gauge the effectiveness of the design in improving the searchability of the airplane.

Qantas Airways and the ATA commented that improved interior design to facilitate searches was highly desirable and that any efforts in this area need to be coordinated with the Transportation Security Administration. Qantas commented that the regulatory requirements (that involve the design) imposed on the operator by TSA should be requirements on the airframe manufacturer as well.

We agree that good coordination with TSA is needed and have coordinated this rulemaking extensively with TSA. In terms of regulatory compliance, regulations are specific in their applicability. To the extent that these requirements apply only to persons subject to the rule, good cooperation between the regulators, manufacturers, and operators is the key to improving security.

L. Operational Requirement To Designate an LRBL

As proposed, § 121.295 would require that existing airplanes which seat more than 60 passengers have a location where a suspected explosive or incendiary device discovered in flight can be placed to minimize the risk to the airplane.

The ATA and AirTran Airways (AirTran) commented on the operational requirement to designate an LRBL and, in particular, how important it was for the airframe manufacturer to provide assistance to operators in identifying the LRBL. They noted that an operator does not have all the design information necessary to make this determination and would need the airframe manufacturer’s help in complying with proposed § 121.295. AirTran also noted that the proposal does not address the procedures required to make proper use of the LRBL.

As discussed in the NPRM, operators have voluntarily designated an LRBL for many years. The FAA and later TSA have worked with airframe manufacturers and operators to implement identification and use of the LRBL without a regulatory requirement in place. This final rule requires the designation of an LRBL but does not require design changes for existing airplanes. Proposed Advisory Circular 25.795–6 addresses procedural issues and provides instruction for operators to obtain the information that the ATA and AirTran are seeking. We agree that close coordination between the operator and manufacturer is vital; however, at present the information needed to identify and carry out the necessary procedures for the LRBL is held by the TSA and is available to operators.

M. Other Measures To Increase Airplane Security

Section 107 (b) of the Aviation and Transportation Security Act states:

b. Implementation of other methods—

As soon as possible after such date of enactment, the Administrator of the Federal Aviation Administration may develop and implement methods to—

1. Use video monitors or other devices to alert pilots in the flight deck to activity in the cabin, except that the use of such monitors or devices shall be subject to nondisclosure requirements applicable to cockpit video recordings under section 113.44(c);

2. Ensure continuous operation of an aircraft transponder in the event of an emergency; and

3. Revise the procedures by which cabin crews of aircraft can notify flight deck crews of security breaches and
other emergencies, including providing for the installation of switches or other devices or methods in an aircraft cabin to enable flight crews to discretely notify the pilots in the case of a security breach occurring in the cabin. Aerospace Services International proposed that closed circuit television be added to airplanes and submitted detailed suggestions for how these systems should operate.

The concept of video monitoring has been discussed at aviation safety and security forums for some years. However, there are numerous concerns (especially as to violation of privacy) associated with use of such systems, and at this point the potential benefits of requiring video monitoring do not outweigh the concerns. This subject was also discussed at some length in the rulemaking on Flightdeck Door Monitoring and Crew Discreet Alerting Systems. Any requirements for use of closed circuit television are beyond the scope of the NPRM and thus would require separate rulemaking. Currently, we do not anticipate rulemaking in that area.

N. Existing Regulations Address Incendiary Devices

Boeing inferred that the FAA equates explosive devices and incendiary devices because of implications that they produce the same effects. Boeing does not agree that these two types of devices produce the same effect. Further, Boeing maintains that existing regulations and airplane design practice already address the effects of an incendiary device.

We agree that different devices may produce different effects and did not intend to equate them in the proposal. Most aircraft fires originating from, for example, mechanical or electrical faults are fairly slow-developing and localized, whereas an incendiary device can produce a fire that is widespread and formed very quickly. For the most part, Halon 1211 can be used to suppress the extensive fire that an incendiary device can cause. However, as discussed in the NPRM, Halon will not be available indefinitely.

In addition, no explicit requirement in the current regulations addresses fire caused by an incendiary device. Therefore, this final rule specifically requires that new airplanes be designed to protect against detonation of such devices. Proposed AC 25.795–5 discusses the subject more fully.

O. Destructive Capability of Explosive or Incendiary Devices

Boeing and Bombardier commented that the NPRM does not specify the destructive capability of the device that the proposed regulations are intended to mitigate.

The commenters are correct. In fact, with this rule we intend to improve an airplane’s survivability from security threats, including explosive and incendiary devices, regardless of the energy of the device. The degree of improvement will vary, depending on the airplane design and the specific device. However, when coupled with other security measures, the effect will be a significant improvement in safety for the public.

Since this final rule and the associated advisory circulars taken together provide clear performance measures, design objectives, and guidance, there is no need to discuss specific device capabilities. In addition, this is sensitive security information and cannot be publicly disclosed. We can be more specific with an applicant for a new type certificate should a particular proposed method of compliance require it. Accordingly, we have made no change to the rule.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. We have determined that there is no current or new requirement for information collection associated with this amendment.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with ICAO Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has identified no differences with these regulations.

III. Regulatory Evaluation, Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates Assessment

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995).

In conducting these analyses, FAA has determined this rule has benefits that justify its costs, and is a “significant regulatory action” as defined in section 3(f) of Executive Order 12866 because it raises novel policy issues contemplated under that executive order. The rule is also “significant” as defined in DOT’s Regulatory Policies and Procedures. Accordingly, OMB has reviewed this final rule.

The rule will not have a significant economic impact on a substantial number of small entities, will not create unnecessary obstacles to international trade, and will not impose an unfunded mandate on state, local, or tribal governments, or on the private sector. These analyses, are discussed below.

Summary of Costs and Benefits

The cost of a fatal aircraft accident involving terrorist bombing and hijacking can exceed one billion dollars. In addition to the direct costs of such an accident are associated costs of Congressional hearings, bankruptcy proceedings, and other litigation following such an accident. Finally, the psychological costs of such an accident are incalculable.

The total estimated costs of this rule are $1.4 billion ($360.0 million present value). This total includes the costs of certification and manufacturing as well as the incremental fuel burn. We estimate larger transport category aircraft costs at $1.3 billion ($326.7 million present value). Smaller transport category airplane costs are $88.8 million ($33.2 million present value).

We estimate the total benefits of this rule at $2.7 billion ($587.7 million present value). The operational benefits alone justify the costs of the rule.

10 Amendment 121–334, 72 FR 45629.
Who Is Potentially Affected by This Rulemaking

Manufacturers and operators of new part 25 transport category airplanes.

Assumptions and Sources of Information

- Period of analysis: 2008 through 2061—While the period of analysis is driven by the estimated number of certifications and corresponding production period, this final rule would still be cost beneficial if analyzed over a 20-year period.
- Discount rate: 7%
- Terrorist Acts: Transportation Security Administration
- Civil Aviation Crimes: 2000 Crime Acts Report, Federal Aviation Administration
- BACK Aviation Solutions: Fleet PC™

Alternatives We Considered

The FAA considered reducing the size of transport category airplanes that would be subject to the requirements contained in this proposal because we believe that smaller airplanes—whether carrying passengers or cargo—are less likely to be the target of terrorists. However, given the importance of maintaining cabin security, this final rule will require protection of the flightcrew compartment for all transport category airplanes required by operating rules to have a flightdeck door.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes “as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.” The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify, and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

In the Initial Regulatory Flexibility Determination we found that there would not be a significant economic impact on a substantial number of small entities. Entities potentially affected by this final rule include manufacturers and operators of part 25 transport category airplanes. We estimate direct cost and not secondary impacts or indirect cost, as measuring indirect costs is speculative and subject to double counting.

We received no comments regarding our initial determination, and our final regulatory flexibility determination is that this final rule will not have a significant economic impact on a substantial number of small entities.

In our classification, we use the size standards from the Small Business Administration. According to those standards, companies with fewer than 1,500 employees (in aircraft manufacturing) are small entities. All U.S. manufacturers of transport category airplanes have more than 1,500 employees; thus none are considered small entities.

A substantial number of operators which purchase larger affected aircraft might be classified as small entities and thus incur cost due to increased fuel consumption. Although a substantial number of small entities will be affected, operational cost savings alone are greater than the additional cost of fuel consumption. In addition, a substantial number of operators which purchase smaller affected aircraft will incur fuel cost due to the incremental weight increase. We estimate that the requirements contained in this final rule will add $2,600 in cost per smaller aircraft annually. This cost equates to roughly $200 per month per aircraft. We do not believe that this cost will be significant in the purchase and operation of a new airplane.

Therefore as the acting FAA Administrator, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–30) prohibits Federal agencies from engaging in any standards or engaging related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

The FAA has assessed the potential effect of this rule and determined that it would promote international trade by standardizing security-related design features of part 25 airplanes and thereby comply with ICAO’s international design standards.

In accordance with the Trade Agreements Act, the FAA used international aircraft safety standards as the basis for this rule and, therefore, is in compliance with the Act.

Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (adjusted annually for inflation with the base year 1995) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a “significant regulatory action.” The value equivalent of $100 million in CY 1995, adjusted for inflation to CY 2007 levels by Consumer Price Index for all Urban Consumers (CPI–U) as published by the Bureau of Labor Statistics, is $136.1 million.

Executive Order 13132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action will not have a substantial direct effect on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore would not have federalism implications.
Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the FAA, when modifying its regulations in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish appropriate regulatory distinctions. In the NPRM, we requested comments on whether the proposed rule should apply differently to intrastate operations in Alaska. We did not receive any comments, and we have determined, based on the administrative record of this rulemaking, that there is no need to make any regulatory distinctions applicable to intrastate aviation in Alaska.

Environmental Analysis

Order 1050.1E defines FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 3f and involves no extraordinary circumstances.

Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this rulemaking under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is a “significant regulatory action” as defined in both Executive Order 12866, and DOT’s Regulatory Policies and Procedures, the final rule is not a “Significant Energy Action” because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

Availability of Rulemaking Documents

You may obtain an electronic copy of rulemaking documents using the Internet by:

1. Searching the Federal eRulemaking Portal (http://www.regulations.gov);
2. Visiting the FAA’s Regulations and Policies Web page at http://www.faa.gov/regulations_policies/; or

You may also obtain a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to identify the amendment number or docket number of this rulemaking.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT’s complete Privacy Act statement in the Federal Register published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78) or you may visit or you may visit http://DocketsInfo.dot.gov.

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. If you are a small entity and you have a question regarding this document, you may contact your local FAA official, or the person listed under the person listed under the FOR FURTHER INFORMATION CONTACT heading at the beginning of the preamble. You can find out more about SBREFA on the Internet at http://www.faa.gov/ regulations_policies/rulemaking/sbre_act./

List of Subjects

14 CFR Part 25

Aircraft, Aviation safety, Incorporation by reference

14 CFR Part 121

Aircraft, Aviation safety, Safety, Transportation,

The Amendment

(a) In consideration of the foregoing, the Federal Aviation Administration (FAA) amends parts 25 and 121 of Title 14, Code of Federal Regulations, as follows:

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

1. The authority citation for part 25 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 4794.

2. Revise §25.795 to read as follows:

§25.795 Security considerations.

(a) Protection of flightcrew compartment. If a flightdeck door is required by operating rules:

(1) The bulkhead, door, and any other accessible boundary separating the flightcrew compartment from occupied areas must be designed to resist forcible intrusion by unauthorized persons and be capable of withstanding impacts of 300 joules (221.3 foot pounds).

(2) The bulkhead, door, and any other accessible boundary separating the flightcrew compartment from occupied areas must be designed to resist a constant 250 pound (1,113 Newtons) tensile load on accessible handholds, including the doorknob or handle.

(3) The bulkhead, door, and any other boundary separating the flightcrew compartment from any occupied areas must be designed to resist penetration by small arms fire and fragmentation devices to a level equivalent to level IIIa of the National Institute of Justice (NIJ) Standard 0101.04.

(b) Airplanes with a maximum certificated passenger seating capacity of more than 60 persons or a maximum certificated takeoff gross weight of over 100,000 pounds (45,359 Kilograms) must be designed to limit the effects of an explosive or incendiary device as follows:

(1) Flightdeck smoke protection. Means must be provided to limit entry of smoke, fumes, and noxious gases into the flightdeck.

(2) Passenger cabin smoke protection. Means must be provided to prevent passenger incapacitation in the cabin resulting from smoke, fumes, and noxious gases as represented by the initial combined volumetric concentrations of 0.59% carbon monoxide and 1.23% carbon dioxide.

(3) Cargo compartment fire suppression. An extinguishing agent must be capable of suppressing a fire. All cargo-compartment fire suppression systems must be designed to withstand the following effects, including support structure displacements or adjacent materials displacing against the distribution system:

(i) Impact or damage from a 0.5-inch diameter aluminum sphere traveling at 430 feet per second (131.1 meters per second);
(ii) A 15-pound per square-inch (103.4 kPa) pressure load if the projected surface area of the component is greater than 4 square feet. Any single dimension greater than 4 feet (1.22 meters) may be assumed to be 4 feet (1.22 meters) in length; and
(iii) A 6-inch (0.152 meters) displacement, except where limited by the fuselage contour, from a single point force applied anywhere along the distribution system where relative movement between the system and its attachment can occur.

(iv) Paragraphs (b)(2)(i) through (iii) of this section do not apply to components that are redundant and separated in
accordance with paragraph (c)(2) of this section or are installed remotely from the cargo compartment.

(c) An airplane with a maximum certificated passenger seating capacity of more than 60 persons or a maximum certificated takeoff gross weight of over 100,000 pounds (45,359 Kilograms) must comply with the following:

(1) Least risk bomb location. An airplane must be designed with a designated location where a bomb or other explosive device could be placed to best protect flight-critical structures from damage in the case of detonation.

(2) Survivability of systems. (i) Except where impracticable, redundant airplane systems necessary for continued safe flight and landing must be physically separated, at a minimum, by an amount equal to a sphere of diameter

\[ D = 2\sqrt{\frac{H_0}{\pi}} \]

where \(H_0\) is defined under § 25.365(e)(2) of this part and \(D\) need not exceed 5.05 feet (1.54 meters). The sphere is applied everywhere within the fuselage—limited by the forward bulkhead and the aft bulkhead of the passenger cabin and cargo compartment beyond which only one-half the sphere is applied.

(ii) Where compliance with paragraph (c)(2)(i) of this section is impracticable, other design precautions must be taken to maximize the survivability of those systems.

(3) Interior design to facilitate searches. Design features must be incorporated that will deter concealment or promote discovery of weapons, explosives, or other objects from a simple inspection in the following areas of the airplane cabin:

(i) Areas above the overhead bins must be designed to prevent objects from being hidden from view in a simple search from the aisle. Designs that prevent concealment of objects with volumes 20 cubic inches and greater satisfy this requirement.

(ii) Toilets must be designed to prevent the passage of solid objects greater than 2.0 inches in diameter.

(iii) Life preservers or their storage locations must be designed so that tampering is evident.

(d) Exceptions. Airplanes used solely to transport cargo only need to meet the requirements of paragraphs (b)(1), (b)(3), and (c)(2) of this section.

(e) Material Incorporated by Reference. You must use National Institute of Justice (NIJ) Standard 0101.04, Ballistic Resistance of Personal Body Armor, June 2001, Revision A, to establish ballistic resistance as required by paragraph (b)(3) of this section.

(1) The Director of the Federal Register approved the incorporation by reference of this document under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You may review copies of NIJ Standard 0101.04 at the:

(i) FAA Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055;

(ii) National Institute of Justice (NIJ), http://www.ojp.usdoj.gov/nij, telephone (202) 307–2942; or

(iii) National Archives and Records Administration (NARA). For information on the availability of this material at NARA go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html or call (202) 741–6030.

(3) You may obtain copies of NIJ Standard 0101.04 from the National Criminal Justice Reference Service, P.O. Box 6000, Rockville, MD 20849–6000, telephone (800) 851–3420.

PART 121—OPERATING REQUIREMENTS: DOMESTIC, FLAG, AND SUPPLEMENTAL OPERATIONS

§ 121.295 Location for a suspect device.

After November 28, 2009, all airplanes with a maximum certificated passenger seating capacity of more than 60 persons must have a location where a suspected explosive or incendiary device found in flight can be placed to minimize the risk to the airplane.

Issued in Washington, DC on October 17, 2008.

Robert A. Sturgell,
Acting Administrator.

[FR Doc. E8–25476 Filed 10–27–08; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 91

[Docket No. FAA–2006–25250; Amdt. No. 91–303]

RIN 2120–A163

Special Awareness Training for the Washington, DC Metropolitan Area; OMB Approval of Information Collection

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; Notice of Office of Management and Budget approval for information collection.

SUMMARY: This notice announces the Office of Management and Budget’s (OMB’s) approval of the information collection requirement contained in the FAA’s final rule, “Special Awareness Training for the Washington, DC Metropolitan Area,” which was published on August 12, 2008.

DATES: The FAA received OMB approval for the information collection requirements in § 91.161 on October 2, 2008. The rule will become effective on February 9, 2009.

FOR FURTHER INFORMATION CONTACT: John D. Lynch, Certification and General Aviation Operations Branch, AFS–810, General Aviation and Commercial Division, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–3844.

SUPPLEMENTARY INFORMATION: On August 12, 2008, the FAA published the final rule, “Special Awareness Training for the Washington, DC Metropolitan Area” (73 FR 46797). The rule requires “special awareness” training for any pilot who flies under visual flight rules (VFR) within a 60-nautical-mile (NM) radius of the Washington, DC VHF omni-directional range/distance measuring equipment (DCA VOR/DME). The rule contains information collection requirements that had not yet been approved by the Office of Management and Budget at the time of publication. In the DATES section of the rule, the FAA noted that affected parties did not need to comply with the information collection requirements until OMB approved the FAA’s request to collect the information.

In accordance with the Paperwork Reduction Act, OMB approved that request on October 2, 2008, and assigned the information collection OMB Control Number 2120–0734. The FAA request was approved by OMB.