

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Parts 108 and 129**

[Docket No. 26268; Notice No. 90-17]

RIN 2120-AD13

Use of X-ray Systems**AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to amend the airplane operator security regulations by removing the exception to meeting the current X-ray imaging standard for X-ray screening systems in use prior to July 22, 1985. Each United States air carrier conducting screening under a mandatory security program would be required to use X-ray systems for carry-on and checked articles that meet the X-ray imaging standard required under its approved security program. Likewise, each foreign air carrier that lands or takes off in the United States would be required to use X-ray screening systems for carry-on and checked articles in the United States that meet the X-ray imaging standard under its accepted security program. This action is needed due to the increased sophistication of terrorist acts. The intended effect is to increase the safety of passengers and crewmembers aboard aircraft by providing an upgraded aid at airport screening points to prevent the carriage of explosives, incendiaries, or deadly or dangerous weapons.

DATES: Comments must be submitted on or before August 20, 1990.

ADDRESSES: Comments on this notice should be mailed, in triplicate, to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC-10), Docket No. 26268, 800 Independence Avenue SW., Washington, DC 20591. Comments delivered must be marked Docket No. 26268. Comments may be examined in room 915G weekdays between 8:30 a.m. and 5 p.m., except on Federal holidays.

FOR FURTHER INFORMATION CONTACT: Lynne Osmus, Civil Aviation Security Division (ACS-101), Office of Civil Aviation Security, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8058.

SUPPLEMENTARY INFORMATION:**Comments Invited**

Interested persons are invited to participate in the making of these

proposed rules by submitting such written data, views, or arguments as they may desire. Comments relating to the environmental, energy, federalism, or economic impact that might result from adopting the proposals in this notice are also invited. Substantive comments should be accompanied by cost estimates. Comments should identify the regulatory docket or notice number and should be submitted in triplicate to the Rules Docket address specified above. All comments received on or before the specified closing date will be considered by the Administrator before taking action on this proposed rulemaking. The proposals contained in this notice may be changed in light of the comments received. All comments received will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a preaddressed, stamped postcard on which the following statement is made: "Comments to Docket No. 26268." The postcard will be date stamped and mailed to the commenter.

Availability of NPRM's

Any interested person may obtain a copy of this NPRM by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Inquiry Center (APA-430), 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-3484. Requests must identify the notice number of this NPRM.

Persons interested in being placed on the mailing list for future NPRM's should request from the above office a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

Background*Statement of the Problem*

Attacks against civil aviation have increased in sophistication over the past decade. As a result, security has become an even greater concern of the aviation community. In recent years, sophisticated explosive devices have been used to damage or destroy civilian airliners resulting in the loss of many lives. The bombing of Pan American World Airways (Pan Am) Flight 103 demonstrates the continuing need to protect the safety and security of

passengers and crewmembers aboard air carriers. Eliminating any exceptions to meeting the most current X-ray imaging standard would be one method by which to address this need.

History

The FAA's Civil Aviation Security Program, initiated in 1973, requires certain U.S. air carriers to conduct security screening to prevent or deter the carriage aboard aircraft of any explosive, incendiary, or deadly or dangerous weapon on or about any individual's person or accessible property. Part 108 of the Federal Aviation Regulations (FAR) (14 CFR part 108), which pertains to U.S. air carriers, was promulgated in 1981 (46 FR 3782; January 15, 1981). The pertinent provisions in part 129, which govern the operations of foreign air carriers that hold a permit issued by the Civil Aeronautics Board or the Department of Transportation under section 402 of the Federal Aviation Act or that hold another appropriate economic or exemption authority issued by those entities, were promulgated in 1976 (41 FR 30106; July 22, 1976).

On May 28, 1985, the FAA issued Amendments Nos. 108-1 and 129-13 (50 FR 25654; June 20, 1985), which established a new standard for testing the effectiveness of X-ray systems. This new standard was effective on July 22, 1985; however, it did not apply to X-ray systems in use prior to that date. In a parallel action, the FAA amended each air carrier's approved security program to include a "grandfather" provision for X-ray systems in use prior to July 22, 1985.

Nearly a decade prior to that, on November 29, 1976, the FAA promulgated new 14 CFR part 191 (41 FR 53777; December 9, 1976) establishing the requirements for withholding security information from disclosure under the Air Transportation Security Act of 1974. Air carrier security programs are documents detailing how U.S. and foreign air carriers will comply with the security requirements contained in the FAR. They contain sensitive security requirements, including specific performance criteria and operational information for X-ray systems, and are not available to the public.

Related Activities

For many years, the passenger screening system has been effective in countering the threat to domestic and international civil aviation, which primarily came from hijackers. In recent years, this threat has expanded to

include aircraft bombings. The bombing of Pan Am Flight 103 is a reminder that civil aviation is still vulnerable to criminal and terrorist acts.

A comprehensive review of security procedures has been conducted to determine where existing procedures may be improved and where new procedures may be warranted. On April 3, 1989, Secretary of Transportation Samuel K. Skinner announced a number of aviation security initiatives to ensure protection of travelers at airports in the United States and other countries. Significant among these initiatives was the commitment to propose the removal of grandfather provisions for older X-ray systems. Other initiatives include requiring the widespread deployment of explosives detection systems (EDS) and the establishment of a mandatory security directives system, both the subject of separate rulemakings that resulted in the issuance of final rules. The final rule requiring EDS was issued on August 30, 1989 (54 FR 36938; September 5, 1989). The final rule establishing the security directives and information circulars system was issued on July 6, 1989 (54 FR 28982; July 10, 1989).

Current Requirements

Presently, part 108 requires each holder of an FAA air carrier operating certificate required to conduct screening to use the procedures, facilities, and equipment described in its approved security program to prevent or deter carriage aboard airplanes of any explosives, incendiaries, or deadly or dangerous weapons on or about each individual's person or accessible property. Part 129 requires each foreign air carrier landing or taking off in the United States to adopt and use a security program acceptable to the Administrator and designed to prevent or deter the carriage aboard airplanes of any explosive, incendiary device, or deadly or dangerous weapon on or about each individual's person or accessible property, with certain exceptions, through screening by weapon-detecting procedures or facilities.

Future Actions

The U.S. Government has actively supported research and development efforts in X-ray systems and the FAA has been evaluating X-ray systems on a continuing basis. The FAA recognizes that there have been significant technological advancements made in X-ray systems. Consequently, the FAA is considering a separate action proposing to amend approved air carrier security programs and accepted foreign air

carrier security programs to establish a more stringent imaging standard than the current standard established in 1985. The FAA expects to make a final determination regarding a more stringent imaging standard prior to taking any final action in this rulemaking. Any final action as a result of this rulemaking will consider the impact, if any, of revision to the imaging standard.

As previously stated, security programs are exempt from disclosure under 14 CFR part 191. In accordance with 14 CFR 191.5, the FAA will not provide the current or any future performance criteria or detailed operational information in any document generally available to the public. The Director of Civil Aviation Security has determined that disclosure of this information would be detrimental to the safety of persons traveling in air transportation or intrastate air transportation.

General Discussion of the Proposals

The FAA is proposing to amend part 108 to ensure that all certificate holders use X-ray systems for carry-on and checked articles that meet the imaging requirements of their approved security programs. The FAA is also proposing to amend part 129 to require foreign air carriers who land or take off in the United States and who conduct screening under an accepted security program to use X-ray systems for carry-on and checked articles in the United States that meet the imaging requirements in their accepted security programs.

Section 108.17

Revision of current paragraph (a)(5) of this section would eliminate a grandfather clause allowing for the exception of certain X-ray systems from the requirement to meet the imaging requirements set forth in an approved air carrier security program using the step wedge specified in American Society for Testing and Materials Standard F792-82.

Section 129.26

Revision of current paragraph (a)(5) of this section would eliminate a grandfather clause allowing for the exception of certain X-ray systems from the requirement to meet the imaging requirements set forth in an accepted air carrier security program using the step wedge specified in American Society for Testing and Materials Standard F792-82.

Regulatory Evaluation Summary

Introduction

This section summarizes a draft full regulatory evaluation prepared by the FAA that provides detailed estimates of the economic consequences of this proposed regulatory action. The full evaluation quantifies, to the extent practicable, estimated costs to the private sector, consumers, Federal, State and local governments, as well as anticipated benefits and impacts.

Executive Order 12291 dated February 17, 1981, directs Federal agencies to promulgate new regulations or modify existing regulations only if potential benefits to society for each regulatory change outweigh potential costs. The order also requires the preparation of a draft Regulatory Impact Analysis of all "major" proposals except those responding to emergency situations or other narrowly defined exigencies. A "major" proposal is one that is likely to result in an annual effect on the economy of \$100 million or more, a major increase in consumer costs, a significant adverse effect on competition or is highly controversial.

The FAA has determined that this proposal is not "major" as defined in the Executive Order, therefore a regulatory analysis, which includes the identification and evaluation of cost-reducing alternatives to the proposal, has not been performed. Instead, the FAA has prepared a regulatory evaluation of just this proposal without identifying alternatives. In addition to a summary of the regulatory evaluation, this section also contains an initial regulatory flexibility determination required by the 1980 Regulatory Flexibility Act (Pub. L. 96-354) and an international trade impact assessment. If more detailed economic information is desired than is contained in this summary, the reader is referred to the full regulatory evaluation contained in the docket.

Costs

The FAA estimates that there are 170 U.S. air carrier and 2 foreign air carrier X-ray systems currently in service that are incapable of meeting current imaging requirements using the step wedge specified in American Society for Testing and Materials Standard F792-82. Such systems would no longer be acceptable for airport security purposes under this proposed regulation. Thus, if issued as a final rule, air carriers would have to begin acquisition of new systems immediately. Even in the absence of this proposal, the 172 systems will some day cease to be used

for aviation purposes, anyway, once they reach the end of their useful lives. According to one manufacturer of X-ray systems, these units have a life expectancy of approximately 8 to 10 years. Because carriers have been prohibited since July 1985, from purchasing additional X-ray systems that do not meet the current imaging standard, all existing systems that fail to meet the standard must be at least 4 years old. Therefore, by assuming a 9-year average life for X-ray systems, the cost of this proposal is the difference between purchasing 172 new standard X-ray systems immediately (net of salvage value for replaced systems) versus purchasing new systems over a 5-year period as the existing systems wear out.

Carriers can choose to buy their replacement systems from several manufacturers. They also have a range of system capabilities to choose from. The proposed rule would reflect both carry-on and checked articles. For the purposes of this analysis, replacement system costs will reflect the price of a standard black and white X-ray system used for handcarried articles because this system meets the current standard. A sales representative for Astrophysics Research Corporation stated such systems retail for about \$32,000 per system, including installation. Prices will vary, however, based on location and number of systems ordered. At \$32,000 each, 172 new systems would cost about \$5.50 million. The replaced system, which has somewhere between zero and 5 years of useful life remaining, will have some resale value for nonaviation purposes such as industrial security. The FAA estimates the current average resale value per system at \$5,000, or about \$0.86 million for all 172 systems still in use. Therefore, the total immediate outlay for new X-ray systems would be \$5.50 million less \$0.86 million = \$4.64 million.

The net cost of this proposal would be \$4.64 million less the cost of replacement systems that are not purchased until the existing systems wear out. In other words, the net cost of the proposal is the difference between the current cost of the systems and the discounted cost of the systems if purchased at a later date. No information is readily available concerning the exact age of each existing system that does not meet the current imaging standard or the current replacement rate of such systems. Therefore, it has been assumed for the purposes of this analysis that one-fifth (34.4) of these systems will be replaced in each of the next 5 years. By that time, each would be a minimum of 9 years old

and have reached the end of the expected useful life. The discounted cost (a 10 percent discount rate is used) to purchase the systems over a 5-year period is \$4.37 million. Therefore, the net cost of this proposal is \$4.64 million less \$4.37 million = \$0.27 million, or about \$1,570 per replacement X-ray system.

Another cost factor concerns anticipated differences in maintenance costs between the replaced systems and the replacement systems. The FAA expects their maintenance costs to be very similar, and will, therefore, not alter the above cost calculations. However, an Astrophysics Research Corporation representative indicated that many of the systems that would be replaced are equipped with image intensifiers that are relatively expensive, and might need replacing once a year. In comparison, technological improvements in the replacement systems have eliminated the need for image intensifiers. Therefore, it is possible that the overall costs of this proposal are somewhat overstated.

Benefits

The proposed regulation would make it more difficult to carry an explosive device onto domestic and international flights. Therefore, it is expected to provide an additional margin of safety and security for passengers and crew members aboard air carriers. The FAA cannot predict the number or severity of future incidents, let alone incidents that would be perpetrated if this proposal does not go into effect. The frequency of terrorist incidents would depend on several factors, including, but not limited to, the world-wide political climate, the skill and technical sophistication of terrorist organizations, and the success of efforts to avert these incidents.

The historical record reveals that 19 separate criminal acts and incidences of terrorism using explosives were perpetrated against U.S. air carriers between 1979 and 1988. Because the FAA expects the threat of sabotage to increase in the future, and because the current X-ray systems in question have been identified as a weak link in the overall U.S. civil aviation security system, it is assumed that some unknown amount of benefit will result from the proposal.

One way to assess the benefits of this proposal is to put expected costs into perspective. The total estimate cost of this proposal, discounted over 5 years (the estimated remaining life of the systems to be replaced), is \$0.27 million. Therefore, if one life is saved sometime in the 5-year period after the proposed

rule would become effective, the cost per life saved would be approximately \$0.27 million. Similarly, if an aircraft with 200 passengers is saved from destruction as a result of this proposal, the cost per life saved would be only \$1,350.

In comparison, using a minimum statistical value of a human life of \$1.0 million, or about \$0.79 million when discounted over 5 years, the benefits associated with saving a single life during the next 5 years would be nearly triple the estimated \$0.27 million cost to accomplish it. Similarly, if an aircraft with 200 passengers and crew is saved as a direct result of this proposal, the ratio of benefits to costs would be 583 to 1.

Given the large difference between potential benefits and known costs, the FAA believes this proposed rule to be cost beneficial.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by government regulations. The RFA requires agencies to review rules that may have a "significant economic impact on a substantial number of small entities."

The FAA's criteria for a "substantial number" is a number that is not less than 11 and that is more than one-third of the small entities subject to the rule. For air carriers, a small entity has been defined as one who owns, but does not necessarily operate, nine aircraft or less. The FAA criteria for "a significant impact" is at least \$3,700 per year for an unscheduled carrier and \$51,800 or \$92,700 per year for a scheduled carrier depending on whether or not the fleet operated includes small aircraft (60 or fewer seats). Although data collection on the carriers affected by this rule has not been completed, the FAA believes that it is very unlikely that the proposal would have a significant economic impact, positive or negative, on a substantial number of small entities. This is because the total estimated compliance cost associated with this rule is only \$0.27 million spread over a 5-year period, and the estimated cost per replacement X-ray system is only \$1,570. Unscheduled carriers would have to currently own and operate nearly 80 percent of the 172 X-ray systems in need of replacement for this rule to have a significant economic impact, positive or negative, on at least 11 small entities. The FAA believes that most of these

X-ray systems are currently owned and operated by entities that are not defined as small.

International Trade Impact Analysis

The proposal, if adopted, would have little or no impact on trade for U.S. firms doing business overseas or for foreign firms doing business in the United States. The proposal affects all carriers of U.S. registry and foreign air carriers who land or take off in the United States, operating scheduled passenger service or public charter passenger operations, or both, that are required to screen passengers under a security program. The expected additional annual costs should not create an economic disadvantage to either domestic operators or foreign carriers operating in the United States.

Federalism Implications

The regulations proposed herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this proposed regulation is not major

under Executive Order 12291. In addition, the FAA certifies that this proposal, if adopted, would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This proposal is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). An initial regulatory evaluation of this proposal, including a Regulatory Flexibility Determination and International Trade Impact Analysis, has been placed in the docket. A copy may be obtained by contacting the person identified under "FOR FURTHER INFORMATION CONTACT."

List of Subjects

14 CFR Part 108

Air carriers, Airports, Air safety, Air transportation, Aviation safety, Baggage, Safety, Security measures, Transportation.

14 CFR Part 129

Air carriers, Airports, Weapons.

The Proposed Amendments

In consideration of the foregoing, the Federal Aviation Administration proposes to amend parts 108 and 129 of the Federal Aviation Regulations (14 CFR parts 108 and 129) as follows:

PART 108—AIRPLANE OPERATOR SECURITY

1. The authority citation is revised to read as follows:

Authority: 49 U.S.C. App. 1354, 1356, 1357, 1421, 1424, and 1511; 49 U.S.C. 106(g) (revised, Pub. L. 97-449, January 12, 1983).

2. Section 108.17(a)(5) is revised to read as follows:

§ 108.17 Use of X-ray systems.

(a) * * *

(5) The system meets the imaging requirements set forth in an approved Air Carrier Security Program using the step wedge specified in American Society for Testing and Materials Standard F792-82.

PART 129—OPERATIONS: FOREIGN AIR CARRIERS AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE

3. The authority citation for part 129 is revised to read as follows:

Authority: 49 U.S.C. App. 1346, 1354(a), 1356, 1357, 1421, 1502, and 1511; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983.)

4. Section 129.26(a)(5) is revised to read as follows:

§ 129.26 Use of X-ray systems.

(a) * * *

(5) The system meets the imaging requirements set forth in an accepted Foreign Air Carrier Security Program using the step wedge specified in American Society for Testing and Materials Standard F792-82.

Issued in Washington, DC, on June 6, 1990.

Monte R. Belger,

Associate Administrator for Aviation Standards.

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