[Docket No. 13841; Amdt. No. 121-117]

PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

Requirements for Use of X-Ray Devices

The purpose of this amendment to Part 121 of the Federal Aviation Regulations is to prescribe requirements governing the use of X-ray devices to inspect carry-on baggage and other items in accordance with approved security programs required by § 121.538.

Interested persons have been afforded an opportunity to participate in the making of this amendment by a notice of proposed rule making (Notice 74-22) published in the FEDERAL REGISTER on June 21, 1974 (39 FR 22275). Due consideration has been given to all comments presented in response to the notice.

Most of the comments received were in accord with the proposal, but certain of them recommended several changes to the proposed amendment.

The Notice proposed to require, for FAA approval of an X-ray system to be used for the inspection of carry-on baggage, that the system meet those standards prescribed by the Food and Drug Administration (FDA) in 21 CFR 1020.40, regardless of the date the system was manufactured. However, upon further consideration of the proposal, in light of comments received, the agency has concluded that the rule as adopted should be consistent with the regulations of the FDA. Accordingly, the proposal has been changed in this amendment to require a showing of compliance with the provisions of 21 CFR 1020.40 for those X-ray systems manufactured on or after April 25, 1974. For systems manufactured prior to April 25, 1974, the proposal has been changed to require a showing that it complies with either (1) the FDA guidelines as published in the FEDERAL REGISTER of August 8, 1973 (38 FR 21442) or (2) the provisions in 21 CFR 1020.40.

In paragraph (a)(4) two examples of the kind of personnel dosimeter acceptable for use have been added parenthetically for purposes of clarification. In addition, that paragraph has been changed from the proposal to provide for the evaluation of dosimeters at the end of each calendar month, rather than every 30 days, in response to comments which suggested such a change for administrative reasons.

The proposal has also been changed by adding in paragraph (b) of this amendment a requirement for a radiation survey to be made of each X-ray system within the 6 calendar months preceding its use in order to ensure that it is performing safely. In addition, the proposal to require a radiation survey to be made each time an X-ray sytem is moved to a new location has been revised (paragraph (c) of this amendment) to provide for an exception to the survey requirement, when it is shown to the satisfaction of the Administrator that the particular system is so designed as to be capable of being moved without altering its performance.

The FAA considers reasonable and appropriate the proposal (paragraph (e) of this amendment) to require a sign to be posted in a conspicuous place which notifies passengers that carry-on baggage and items are being inspected by an X-ray system and advises them to remove X-ray, and scientific film from their carry-on baggage and other items before inspection. Consistent with the intent of the proposal, and in response to comments received, a provision has been added to paragraph (e) to ensure that all carry-on photographic equipment and film packages are physically inspected without exposure to an X-ray system, if the passenger requests such an inspection.

The FAA believes the use of X-ray systems facilitates the security inspection of passenger carry-on baggage and serves to discourage potential hijackers from attempting to smuggle weapons and other dangerous articles aboard aircraft. The FDA guidelines and standards provide performance requirements for radiation attenuation, safety interlock systems, warning devices, and instructions. These criteria should be sufficient to prevent harmful radiation emissions due to unsafe design or system malfunction.

The FDA regulations require a means that ensures the presence of an operator in a position which permits surveillance of the ports and doors during generation of X-ray radiation. The FAA believes this requirement will provide adequate protection against any person climbing on the baggage conveyor belt and being exposed to radiation from the X-ray system.

In addition, the FAA believes this amendment will ensure adequate monitoring of X-ray systems, since it requires each system to meet FDA performance criteria, requires a radiation survey of each system at least every 6 months, and requires each operator of a system to wear a personnel dosimeter.

As pointed out in the notice, any person who knows of the use of an X-ray system by a Part 121 certificate holder to inspect carry-on baggage or items that does not comply with that certificate holder's security program, as approved under § 121.538, or comply with the provisions of § 121.538a, may report the matter to any FAA regional or district office. The FAA will investigate each alleged violation reported and take appropriate administrative or enforcement action in accordance with the procedures set forth in 14 CFR Part 13. If deemed appropriate, the FAA may request advice and assistance from the Food and Drug Administration or any other government agency in the conduct of its investigation.

(Secs. 313(a), 601, and 604 of the Federal Aviation Act of 1958; (49 U.S.C. 1354(a), 1421, and 1424) Sec. 6(c) of the Department of Transportation Act; (40 U.S.C. 1655(c)))

In consideration of the foregoing, and for the reasons stated in Notice 74-22, Part 121 of the Federal Aviation Regulations is amended effective April 4, 1975, by adding after § 121.538 a new § 121.538a to read as follows:

§ 121.538a Use of X-ray system.

(a) No certificate holder may use an X-ray system to inspect carry-on baggage or items unless specifically authorized under an approved security program required by § 121.538 or use such a system contrary to its approved security program. The Administrator authorizes a certificate holder to use an X-ray system for inspecting carry-on baggage or items, under an approved security program, if the certificate holder shows that:

(1) For a system manufactured prior to April 25, 1974, it meets either the guidelines issued by the Food and Drug Administration (FDA), Department of Health, Education, and Welfare and published in the FEDERAL REGISTER (38 FR 21442, August 8, 1973; or the performance standards for cabinet X-ray systems designed primarily for the inspection of carry-on baggage issued by the FDA and published in 21 CFR 1020.40 (39 FR 12985, April 10, 1974);

(2) For a system manufactured after April 24, 1974, it meets the standards for cabinet X-ray systems designed primarily for the inspection of carry-on baggage issued by the FDA and published in 21 CFR 1020.40 (39 FR 12985, April 10, 1974);

(3) A program for initial and recurrent training of operators of the system has been established, which includes training in radiation safety, the efficient use of X-ray systems, and the identification of weapons and other dangerous articles;

(4) Procedures have been established to ensure that each operator of the system will be provided with a personnel dosimeter (such as a film badge or thermo luminescent dosimeter), each

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dosimeter used will be evaluated at the end of each calendar month, and records of operator duty time and the results of dosimeter evaluations will be maintained by the certificate holder; and

(5) The system has the capability of distinguishing an insulated 24-gauge, solid copper wire.

(b) No certificate holder may use an X-ray system, unless within the preceding 6 calendar months a radiation survey has been conducted which shows that the system meets the applicable performance standards in 21 CFR 1020.40 or guidelines published by the Food and Drug Administration in the FEDERAL REGISTER of August 8, 1973 (38 FR 21442).

(c) No certificate holder may use an X-ray system after the system is initially installed or after it has been moved from one location to another, unless a radiation survey is conducted which shows that the system meets the applicable performance standards in 21 CFR 1020.40 or guidelines published by the Food and Drug Administration in the FEDERAL REGISTER of August 8, 1973 (38 FR 21442); except that a radiation survey is not required for an X-ray system that is moved to another location, if the certificate holder shows that the system is so designed that it can be moved without altering its performance.

(d) No certificate holder may use an X-ray system that is not in full compliance with any defect notice or modification order issued for that system by the Food and Drug Administration, Department of Health, Education, and Welfare, unless that Administration has advised the FAA that the defect or failure to comply is not such as to create a significant risk or injury, including genetic injury, to any person.

(e) No certificate holder may use an X-ray system to inspect carry-on baggage or items, unless a sign is posted in a conspicuous place which notifies passengers that such items are being inspected by an X-ray system and advises them to remove all X-ray and scientific film from their carry-on baggage and items before inspection. If the X-ray system exposes any carry-on baggage or item to more than one milliroentgen during the inspection, the certificate holder shall post a sign which advises passengers to remove film of all kinds from their carry-on baggage and items before inspection. If requested by a passenger, his photographic equipment and film packages shall be physically inspected without exposure to an X-ray system.

Issued in Washington, D.C., on February 26, 1975.

ALEXANDER P. BUTTERFIELD,
Administrator.

[FR Doc.75-5747 Filed 3-4-75;8:45 am]