

# Federal Register

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**Wednesday**  
**September 1, 1993**

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## **Part III**

## **Department of Transportation**

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**Federal Aviation Administration**

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**14 CFR Part 121**

**Protective Breathing Equipment Training;  
Final Rule**

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 121**

[Docket No. 24792; Amendment No. 121-234]

RIN 2120-AD76

**Protective Breathing Equipment Training**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

**SUMMARY:** The FAA revises the current regulations requiring Part 121 crewmembers to perform an approved firefighting drill using protective breathing equipment (PBE). The current rule requiring training of Part 121 crewmembers in the use of protective breathing equipment (PBE) requires the use of the PBE while fighting an actual fire. This final rule will permit air carriers to use a simulated fire during PBE training if their training includes an additional firefighting drill with an actual fire. This action was prompted by a letter from the Association of Flight Attendants (AFA) and petitions for exemption from Pan American World Airways (Pan Am) and United Airlines, Inc. The objective of the amendment is to ensure that each crewmember accomplishes a firefighting drill in which the crewmember combats an actual fire in addition to, or combined with, a PBE drill.

**DATES:** This final rule is effective September 1, 1993.

**FOR FURTHER INFORMATION CONTACT:** Larry Youngblut, Project Development Branch, AFS-240, Air Transportation Division, Flight Standards Service, 304B, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267-8096.

**SUPPLEMENTARY INFORMATION:****Availability of the final rule**

Any person may obtain a copy of this amendment 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. Communications must identify the amendment number of this final rule.

**Background**

The requirement for Part 121 crewmembers to perform an approved firefighting drill using PBE is prescribed

in § 121.417(c)(1)(i) of the Federal Aviation Regulations (FAR). The regulation requires that each crewmember perform a one-time, approved firefighting drill with an actual fire during initial training, using at least one type of installed hand fire extinguisher appropriate for the type of fire to be fought and the type of installed PBE required by § 121.337.

On May 26, 1987, the current requirement was issued in Amendment No. 121-193, Protective Breathing Equipment (52 FR 20950; June 3, 1987). The amendment was based on National Transportation Safety Board (NTSB) recommendations and on information received from investigations of accidents in which smoke and noxious fumes may have impeded crewmembers fighting cabin fires. In addressing these safety concerns, the rule included a training requirement for crewmembers to perform an approved firefighting drill, fighting an actual fire, using PBE.

On March 14, 1989, the FAA issued Advisory Circular (AC) 121-31, Training on Protective Breathing Equipment, which provided guidance for crewmember training using PBE. This AC incorrectly offered two options for meeting the firefighting drill requirements. In the first option, a carrier could require each crewmember to perform a firefighting drill by fighting an actual fire using an appropriate fire extinguisher while wearing PBE. The second option, known as a "split drill," allowed crewmembers to perform the firefighting drill by fighting a simulated fire using an appropriate fire extinguisher while wearing PBE. However, the crewmember was required to perform an additional drill, which did not have to include the use of PBE, but which had to include the fighting of an actual fire using an appropriate fire extinguisher.

The FAA received a number of inquiries about the recommended firefighting drills described in AC 121-31. Action Notice 8430.40, Training on Protective Breathing Equipment, issued on June 7, 1989, also allowed the split drill, but additionally suggested that a carrier could use simulation for both drills if the training had been approved by the Air Transportation Division. In a January 26, 1990, letter to the FAA, AFA requested enforcement of § 121.417(c)(1)(i). AFA's letter stated that some flight attendant trainees are not fighting an actual fire while wearing PBE in the firefighting drill, as required by the regulation. AFA maintained that several carriers are not in compliance with the regulation and that any deviation from the requirements should

be handled through the exemption process.

The FAA, in response to AFA's letter, stated that an actual fire must be fought during the drill required by § 121.417(c)(1)(i) and that PBE must be worn while fighting an actual fire in that drill. Therefore, any carrier who is not using an actual fire during the drill required in § 121.417(c)(1)(i) is not complying with the regulation.

United Airlines, Inc., filed a petition for exemption dated September 17, 1990. The petition requested exemption from § 121.417(c)(1)(i) in order to permit the one-time firefighting drill to be accomplished using "fire simulation." The petition stated that the use of training aids was not evaluated in the preamble to Amendment No. 121-193 and that an appropriate course of action is to improve training aids and apply them to carefully developed training objectives. The petition also stated that, with the exception of the preamble language of Amendment No. 121-193, the language of the final rule appears to allow a firefighting drill using simulated fires instead of actual fires. In addition, the petitioner expressed environmental concerns about the use of actual fires, the discharge of Halon fire extinguishers during firefighting training, and possible bans or restrictions of such training imposed by political jurisdictions.

**Review of Industry Practices**

An FAA review of Part 121 air carrier firefighting training programs disclosed that more than one-half of all of part 121 air carrier training programs require crewmembers to fight an actual fire while wearing PBE during firefighting drills. An additional one-fourth of the air carrier training programs require crewmembers to perform two firefighting drills—one in which they fight a simulated fire while wearing PBE and another in which they fight an actual fire without using PBE. The remaining air carrier training programs use only fire simulation in their firefighting and PBE drills despite an FAA interpretation, based on the preamble to Amendment 121-193 (52 FR 20950), that an actual fire must be fought during initial training.

**Notice of Proposed Rulemaking No. 92-11**

On August 14, 1992, the FAA proposed in Notice No. 92-11 that air carriers be allowed to separate the training required by § 121.417 into two categories: training on PBE and training on firefighting equipment. The FAA determined that simulated training should be allowed during the training on PBE, but also maintained its longstanding position that it is essential

longstanding position that it is essential that crewmembers complete a one-time firefighting drill in which they combat an actual fire with an appropriate fire extinguisher as a part of training on firefighting equipment. Thus, the notice proposed to allow the training required under § 121.417 to be accomplished in two drills (a PBE drill using simulation and a firefighting drill using an actual fire) or one drill in which the crewmember fights an actual fire while wearing the PBE unit.

#### Discussion of Comments

The FAA received eight comments, including two late-filed comments, on the proposed rule.

The Association of Professional Flight Attendants (APFA) comments that it supports the action of the notice, i.e., fighting an actual fire as a part of the required drill; however, APFA also believes that the "split drill" is less effective. APFA states that flight attendants who have actually fought cabin fires have expressed a concern that the removal of the PBE from its container was much more difficult and time consuming than they anticipated. APFA recommends that a PBE drill be defined as an emergency drill in which a crewmember demonstrates the proper removal and use of the PBE, and that removal be emphasized in the training.

**FAA response:** The FAA has issued guidance to Principal Operations Inspectors that they should ensure that their assigned air carriers have FAA approved training courses which replicate the forces necessary to open the pouches. The FAA agrees with APFA's comment and believes that this improvement in training will have the results that the APFA wants.

The Regional Airline Association (RAA) supports the proposal, but objects to the requirement to use a fire extinguisher and PBE unit identical to that installed in the airplane instead of equivalent extinguishers and appropriate PBE training devices. The RAA is concerned that this would mean an additional training drill if a cabin crewmember is reassigned to an airplane that used a different type of fire extinguisher. The Association also urges the FAA to reword the final rule so that substitutes for HALON extinguishers may be used in order to avoid damaging the environment. RAA also proposed that the compliance date be no sooner than 1 year after the effective date.

**FAA response:** Simulated PBE equipment, i.e., a training hood, is acceptable if it is approved by the principal operations inspector (POI). A training hood must accurately replicate the forces necessary to open the pouch.

Some airlines have installed PBE equipment in pouches which are stapled and therefore are difficult to open. When this is the case it is important that the "training" pouch simulate the forces necessary to open the actual equipment.

While it is important that each crewmember operate the fire extinguishers that are installed on the airplane, it is not necessary that installed fire extinguishers be used to actually fight the fire. The intent of the rule is that training programs accomplish the training objectives of having crewmembers know how to use the equipment and experience the psychological aspects of fighting a real fire. The training objective of knowing how to use a fire extinguisher can be met by having each crewmember remove the fire extinguisher from stowage and demonstrate the proper operation. The benefit of experiencing the psychological effect of being faced with an actual fire and having to control it can be met by the use of other extinguishing agents. To incorporate this concept in the amendatory language, definitions for simulation devices for both fire extinguishers and PBE units are added to the definitions section of the amendment.

The FAA acknowledges the comment from RAA indicating that some certificate holders may need additional time to comply with the requirement to fight an actual fire. The FAA will address the problems of those certificate holders on an individual basis.

The Air Transport Association (ATA) likewise urges the use of "training hoods" so that airlines are able to avoid higher costs associated with use of actual PBE units. ATA also notes that the FAA issued policy statements that HALON extinguishers should be avoided. ATA urges that language be added which clearly specifies the use of "other extinguishing agents" for aircraft where HALON extinguishers are used. ATA states that it continues to support United Airlines' petition for exemption to permit the use of simulation alone for the required drill. ATA states that it finds FAA inconsistent in promulgating the Advanced Qualification Program rule, which supports innovation and simulation in training, while at the same time repudiating those goals by requiring a live fire for the PBE drill.

Air Wisconsin also urges the FAA to allow training hoods and states that if carriers are required to use the approved PBE units the cost would be staggering.

An individual physician comments that the reuse of PBE units by different individuals could result in the transmission of disease, particularly

hepatitis and tuberculosis. This individual urges instead that the FAA permit the use of training devices to preclude imposing an unnecessary financial burden on airlines.

**FAA response:** The FAA approves of the use of "training hoods" if they properly simulate the PBE equipment that is installed on the aircraft. The FAA believes that there are many "training hoods" available which do this. Most of the training problems which have been noted have concerned the opening of the pouch which houses the PBE. It is important that crewmembers receive training on the removal of the PBE from the pouch especially when the pouch is stapled and difficult to open.

This final rule allows airlines to use extinguishing materials other than HALON during the actual firefighting portion of the PBE drill. Therefore, incorporating the phrase "other extinguishing agents" is unnecessary.

The FAA does not believe that requiring crewmembers to experience the psychological effects of fighting an actual fire is in conflict with the principles of the Advanced Qualification Program rule. The training objectives of being able to use a fire extinguisher properly and to correctly use PBE are still subject to innovation and simulation. The FAA believes that by allowing the "split drill" it is encouraging the use of creativity in simulation.

The Association of Flight Attendants (AFA) opposes the proposed revision. AFA quotes one attendant who states that the PBE unit makes everything look different and particularly distorts the appearance of the fire. This crewmember found it beneficial to have experienced how the mask would feel, how the fire would look, and how the fire would respond to the extinguisher while wearing the mask. Noting that there are gradations in the sophistication of simulation, AFA urges the FAA to define the quality of the actual and simulated fires. AFA also encourages that, if the split drill is allowed, the FAA require for those carriers that elect to use it—(1) recurrent training every 24 months to reinforce the actual one-time fire experience, and (2) a drill that includes taking the PBE out of the stowed position, donning it, and learning the indications for a low or depleted oxygen supply.

**FAA response:** One of the reasons that the FAA has decided to allow the split drill is to provide the opportunity for airlines to use simulation and innovation during fire extinguisher training. The agency agrees that distortion occurs and believes that this training will give the flight attendant

experience in many aspects of distortion.

The FAA is aware that there are many types and grades of fires which are appropriate to the fire fighting portion of the PBE drill, and individual PO's are given the responsibility of approving the fire. The quality of fire to be used in this training is contingent on the location of the fire, the airline facilities, and local ordinances. It would be difficult for the FAA to provide guidance which would be appropriate to each situation.

The FAA will continue to monitor the PBE drills and their effectiveness, and, if it believes that further instruction should be provided during recurrent training, it will make this a requirement. The present requirement in § 121.417(b)(2), "individual instruction in the location, function, operation of emergency equipment \* \* \*" should indicate that instruction should be given on PBE during the emergency training portion of an air carrier's approved training program.

In addition, § 121.417(c)(2) requires, "Additional emergency drill requirements to be accomplished during initial training and once each 24 calendar months during recurrent training." This additional training in § 121.417(c)(2)(i)(C) includes "Each type of emergency oxygen system to include protective breathing equipment." This means that a drill must be performed each 24 months which includes the operation of PBE. The FAA agrees with AFA that this drill should include removing the PBE from its stowed position, donning it, and demonstrating knowledge of the low oxygen indicators.

The FAA does not believe it is necessary to expose crewmembers to an actual fire every 24 months.

The Air Line Pilots Association (ALPA) opposes the proposed revision, stating that PBE training should be as realistic as possible, not given an artificial separation by a split drill that will leave crewmembers with incomplete training. ALPA states that the training is incomplete because if a crewmember had to actually fight a cabin fire, he or she would never before have used the PBE and firefighting equipment together.

**FAA response:** The FAA finds that the training objectives in the use of PBE can be met through either the two separate drills or one combined drill. The training benefits of the simulation are different from the psychological benefit of experiencing an actual fire. For example, locating a fire in a seat cushion, lavatory, or galley would be impracticable to duplicate with an actual fire, but such an experience has

a recognized training benefit. In addition, the FAA recognizes that although not all firefighting situations require the use of PBE, they usually require the use of a fire extinguisher. Therefore, the experience of fighting an actual fire with a fire extinguisher has a separate, and intrinsic, benefit.

Finally, one comment was received from a training company, which had no substantive comments on the NPRM.

#### Intent of the Amendment

Based on its review of current industry practices, Pan Am and United Airlines' petitions for exemption, and letters from AFA, the FAA has reevaluated the requirements of the current regulation and hereby amends the rule. The objective of the current regulation is to train crewmembers on the use of PBE and firefighting equipment available on aircraft in which they are assigned duties. This training includes the activation of PBE and fire extinguishers in fighting an actual fire. Currently, crewmembers are required to meet these training objectives by performing an approved firefighting drill in which they fight an actual fire with an appropriate fire extinguisher while wearing PBE. The FAA has determined, however, that air carriers should be allowed to separate this training into two categories: training on PBE and training on firefighting equipment. The FAA has also determined that simulated fires should be allowed during training on PBE, but that it is essential that crewmembers complete a one-time firefighting drill in which they combat an actual fire with an approved fire extinguisher as a part of training on firefighting equipment.

Under this amendment, air carriers may continue to combine the training on PBE and firefighting equipment training into one drill if an actual fire is used during the training. However, if simulated fires are used during PBE training, each crewmember must complete a separate firefighting drill with an actual fire using a fire extinguisher. Crewmembers would still be required to have knowledge and skill relating to firefighting techniques and the operation and use of PBE, as well as first-hand knowledge of how an actual fire reacts to a fire extinguisher.

#### General Discussion of the Amendment

##### Section 121.417

Section 121.417(c)(1)(i) requires crewmembers to combat an actual or simulated fire using at least one type of installed hand fire extinguisher, or approved simulation device,

appropriate for the type of fire, while wearing the appropriate type of PBE. This requirement is designated as a PBE drill, and it emphasizes the correct use of PBE in a firefighting scenario. The crewmember performs the drill by using PBE while combatting an actual or simulated fire.

The FAA acknowledges the training benefits of simulation and the various firefighting scenarios that may be enacted when using a simulated fire in combination with a mock-up of an aircraft cabin, galley, oven, lavatory, or passenger seat. In addition to demonstrating proper operation of the emergency firefighting equipment, crewmembers can be trained in proper crew coordination, communication, and decision-making. Many major air carriers currently conduct PBE training in sophisticated cabin trainers that are equipped with various types of devices that simulate smoke and fire. The FAA recognizes that training with simulated fires, in addition to a fire extinguishing drill that includes an actual fire, is beneficial because it allows various aircraft firefighting situations to be created in the environments in which they are likely to take place. The FAA also recognizes that many air carriers may choose not to use simulation. These carriers are then required to have their crewmembers perform the PBE drill using an actual fire, as prescribed by current § 121.417(c)(1)(i). In such a combined drill, crewmembers still demonstrate the proper use of PBE and fight an actual fire using an appropriate type of fire extinguisher wearing PBE.

##### Section 121.417(c)(1)(ii)

This new paragraph requires air carriers to conduct approved firefighting drills in which crewmembers fight an actual fire using an installed hand fire extinguisher appropriate for the type of fire. The requirement does not apply to crewmembers whose PBE drill under § 121.417(c)(1)(i) is conducted with an actual fire. The FAA acknowledges that the firefighting drill, including an actual fire, is a one-time requirement; therefore, if a crewmember fights an actual fire during the PBE drill, the crewmember need not perform another drill with an actual fire. Furthermore, crewmembers are not required to fight an actual fire in the additional initial or recurrent training drills set forth in current § 121.417(c)(2).

This added section emphasizes the importance of firefighting training that includes a drill in which a crewmember fights an actual fire. The psychological effect of facing an actual fire cannot be achieved through simulation.

The FAA's primary goal in revising these requirements is to clarify and reinforce the present requirement that crewmembers undergo a one-time training drill in which they combat an actual fire. This was stated in the preambles to Amendment No. 121-193 and Amendment 121-220. By permitting air carriers to allow crewmembers to perform the currently required PBE firefighting drill with a simulated fire, the FAA would allow air carriers additional flexibility in providing quality training for various types of situations.

One of AFA's primary concerns is that there are crewmembers working in the industry who have not fought an actual fire in training. This amendment modifies the current requirement by providing an alternative to the current regulation. However, each crewmember would still be required to fight an actual fire in initial training. The FAA recognizes that, although not all firefighting situations require the use of PBE, they usually require the use of a fire extinguisher. Therefore, the FAA believes that the change in the structure of the current regulation enhances firefighting training objectives.

#### Section 121.417(d)

Section 121.417(d) will require any crewmember who serves in part 121 operations to have completed the PBE drill and the firefighting drill in paragraphs (c)(1)(i) or (c)(1)(ii) by [insert effective date of final rule], the effective date of this amendment. The FAA has determined that this will allow sufficient time for carriers to determine which crewmembers have completed the training as prescribed by this amendment. If it has not been given in initial training it will be necessary for the air carrier to give that training in recurrent training sessions or in specially scheduled sessions. It will be necessary for air carriers to schedule sessions efficiently.

This section also contains a provision that would credit crewmembers who have performed the PBE and firefighting drills described in paragraphs (c)(1)(i) and (c)(1)(ii) with meeting the requirements of the regulation if the firefighting training and PBE training was performed after May 26, 1987. However, to receive credit, the carrier must present to the Director of Flight Standards Service information or documentation showing that the crewmember accomplished firefighting training in a manner that would meet the requirements of the amendment.

The May 26, 1987, date corresponds to the date of issuance of Amendment No. 121-193. The FAA believes that it

is not feasible for credit to be given for firefighting drills performed prior to May 26, 1987, because requirements for firefighting drills involving an actual fire, simulated fire, or PBE training did not exist in the FAR prior to that date.

#### Section 121.417(f)

This final rule amends § 121.417(f) by defining the terms "actual fire," "approved fire extinguisher," "approved PBE simulation device," "observe," "perform," "simulated fire," "combats," and "PBE drill" to this section. For the purposes of this final rule, "actual fire" means an ignited combustible material, in controlled conditions, of a sufficient magnitude and duration to accomplish the training objectives outlined in paragraphs (c)(1)(i) and (c)(1)(ii) of the rule. The FAA is not requiring exact dimensions and types of materials to be used for actual fires in the firefighting drills. To do so would mean that crewmembers might have to be retrained because their previous training might not meet these specific requirements. This additional training could impose an additional cost on air carriers.

A review of current industry practice shows that air carriers frequently contact local or airport fire departments prior to conducting any type of firefighting training, and, in some cases, fire department personnel are present during training. Many local fire departments provide training course outlines on the use of small, hand fire extinguishers, and they also typically provide training on the operation of hand fire extinguishers to employees of local businesses and organizations. These employees are given the opportunity to extinguish an actual fire under fire department supervision.

Among the materials used by fire departments and air carriers in creating actual fires are kerosene or diesel fuel floating on water in a metal pan or drum. These types of fires are ignited outdoors in an open area. Some air carriers and fire departments have constructed indoor fire rooms or fire pits in which they ignite materials such as seat cushions and use exhaust fans to eliminate smoke.

The amendment defines a "simulated fire" as an artificial duplication of a fire used to create the various firefighting situations that could occur on an aircraft. Smoke simulation is a component of that fire simulation. Artificial smoke may be used to simulate smoke coming from a galley oven, under a lavatory door, or under a passenger seat.

Under the amendment, "combats," used in this context, means fighting an

actual or simulated fire until such fire is extinguished. In the case of a simulated fire, extinguishment would be determined by the instructor.

The amendment defines "PBE drill" as an emergency drill in which a crewmember demonstrates the proper use of protective breathing equipment while fighting an actual or simulated fire.

The FAA plans to issue an AC or Operations Bulletin providing additional detailed guidance on the use of PBE, actual fires, and adequate simulation of a fire. The guidance will be based on industry practices that experience has shown to be adequate.

#### Section 121.417(c)(1)(iii)

Section 121.417(c)(1)(iii) is redesignated as § 121.417(c)(1)(iii). The emergency evacuation drill requirements listed in this section would remain unchanged.

#### Paperwork Reduction Act

Information collection requirements for part 121 have been previously approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511) and have been assigned OMB Control Numbers as follows: for Part 121, OMB Control Number 2120-0008.

#### Regulatory Evaluation Summary

This rule is not a major rule under Executive Order 12291 but is a significant rule under the Department of Transportation Regulatory Policies and Procedures. The rule will impose no costs on society (aviation industry, public, or government). Also, no quantifiable benefits are derived from the rule.

The rule will impose no costs because it prescribes neither additional constraints nor requirements on the airlines. The amendment simply responds to requests by the industry for clarification of PBE requirements. This rule will allow Part 121 carriers to choose between two options to meet firefighting training requirements. The rule makes clear that either of the two options is sufficient to comply with the FAR. Airlines may choose the least costly of these options.

Although the amendment will not place additional requirements on Part 121 operators, it ensures that each crewmember combats an actual fire in addition to or in combination with a PBE drill without additional requirements. Hence, the FAA considers this a cost beneficial rule.



### International Trade Impact Analysis

This rule will have no effect on the sale of foreign products or services in the United States. The rule also does not affect the sale of United States products or services in foreign countries. Hence, all foreign and domestic trade will be equally unaffected by this rule.

### Regulatory Flexibility Act Determination

The Regulatory Flexibility Act of 1980 (RFA) ensures that government regulations do not needlessly and disproportionately burden small businesses. The RFA requires the FAA to review each rule that may have a significant economic impact on a substantial number of small entities. This amendment will not impose additional costs at all. Hence, the rule will not impose a significant cost on a substantial number of small entities.

### Objectives of and Legal Basis of the Rule

The objective of the amendment, which is discussed in detail in the preamble to this regulation, is to provide an increased margin of safety against the hazards of in-flight fires. The legal basis of the proposal comes from sections 313(a), (314)(a), 601 through 610, and 1102 of the Federal Aviation Act of 1958, as amended (49 U.S.C App 1354(a), 1355, 1356, 1357, 1401, 1421 through 1430, 1472, 1485, and 1502); 49 U.S.C. 106(g) (Revised Public Law 97-449, January 12, 1983).

### Good Cause Justification for Immediate Effective Date

This amendment is being made effective immediately because delay could have an immediate impact on training of crewmembers and ultimately upon passenger service in the air carrier industry.

Accordingly, I find that good cause exists for making this final rule effective immediately.

### Federalism Implications

The amendment will not have substantial direct effect 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule will not have sufficient federalism implications to warrant the preparation of Federalism Assessment.

### Conclusion

For the reasons discussed in the preamble, and based on findings in the

Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is not major under Executive Order 12291. In addition, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the RFA. This amendment is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A final regulatory evaluation of the amendment was not prepared since it was determined that the rule will impose no costs on society.

### List of Subjects in 14 CFR Part 121

Aviation safety, Air carriers, Aircraft, Transportation, Airmen, Federal Aviation Administration, Reporting and record keeping requirements, Safety.

### The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends parts 121 of the Federal Aviation Regulations (14 CFR part 121) as follows:

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

1. The authority citation for part 121 continues to read as follows:

**Authority:** 49 U.S.C. App 1354(a), 1355, 1356, 1357, 1401, 1421-1430, 1472, 1485, and 1502; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

2. Section 121.417 is amended by revising paragraphs (c)(1)(i), (d), and (f), redesignating current paragraph (c)(1)(ii) as (c)(1)(iii) and adding a new paragraph (c)(1)(ii) to read as follows:

#### § 121.417 Crewmember emergency training.

\* \* \* \* \*

(c) \* \* \*

(1) \* \* \*

(i) At least one approved protective breathing equipment (PBE) drill in which the crewmember combats an actual or simulated fire using at least one type of installed hand fire extinguisher or approved fire extinguisher that is appropriate for the type of actual fire or simulated fire to be fought while using the type of installed PBE required by § 121.337 or approved PBE simulation device as defined by paragraph (d) of this section for combatting fires aboard airplanes;

(ii) At least one approved firefighting drill in which the crewmember combats an actual fire using at least one type of installed hand fire extinguisher or

approved fire extinguisher that is appropriate for the type of fire to be fought. This firefighting drill is not required if the crewmember performs the PBE drill of paragraph (c)(1)(i) by combating an actual fire; and

\* \* \* \* \*

(d) After September 1, 1993, no crewmember may serve in operations under this part unless that crewmember has performed the PBE drill and the firefighting drill described by paragraphs (c)(1)(i) and (c)(1)(ii) of this section, as part of a one-time training requirement of paragraphs (c)(1) or (c)(2) of this section as appropriate. Any crewmember who performs the PBE drill and the firefighting drill prescribed in paragraphs (c)(1)(i) and (c)(1)(ii) of this section after May 26, 1987, is deemed to be in compliance with this regulation upon presentation of information or documentation, in a form and manner acceptable to the Director, Flight Standards Service, showing that the appropriate drills have been accomplished.

\* \* \* \* \*

(f) For the purposes of this section the following definitions apply:

(1) *Actual fire* means an ignited combustible material, in controlled conditions, of sufficient magnitude and duration to accomplish the training objectives outlined in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(2) *Approved fire extinguisher* means a training device that has been approved by the Administrator for use in meeting the training requirements of § 121.417(c).

(3) *Approved PBE simulation device* means a training device that has been approved by the Administrator for use in meeting the training requirements of § 121.417(c).

(4) *Combats*, in this context, means to properly fight an actual or simulated fire using an appropriate type of fire extinguisher until that fire is extinguished.

(5) *Observe* means to watch without participating actively in the drill.

(6) *PBE drill* means an emergency drill in which a crewmember demonstrates the proper use of protective breathing equipment while fighting an actual or simulated fire.

(7) *Perform* means to satisfactorily accomplish a prescribed emergency drill using established procedures that stress the skill of the persons involved in the drill.

(8) *Simulated fire* means an artificial duplication of smoke or flame used to create various aircraft firefighting scenarios, such as lavatory, galley oven, and aircraft seat fires.

Issued in Washington, DC, on August 26,  
1993.

**David R. Hinson,**  
*Administrator.*

[FR Doc. 93-21280 Filed 8-27-93; 2:18 pm]

**BILLING CODE 4910-13-M**