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TITLE 14 - AERONAUTICS AND SPACE

CHAPTER I - FEDERAL AVIATION AGENCY

[Regulatory Docket No. 874; Amendment 46-7]

PART 46 - SCHEDULED AIR CARRIER HELICOPTER CERTIFICATION AND OPERATION RULES

Flight Crewmember Qualifications

The Federal Aviation Agency published as a notice of proposed rule making (26 F.R. 8464) and circulated as Civil Air Regulations Draft Release No. 61-18 dated August 31, 1961, a proposal to amend Part 46 of the Civil Air Regulations with respect to the recency of experience required for helicopter pilots and the maintenance of pilot route and heliport qualifications.

Written comments were received from interested groups both endorsing and opposing the proposal. The Air Transport Association was strongly in favor of the proposal and recommended immediate implementation. The Air Line Pilots Association, however, opposed any relaxing of the requirements and firmly recommended more stringent requirements for pilot route qualification when serving in night operations.

Draft Release 61-18 proposed to extend the present 30-day recency of experience provision to 90 days. When Part 46 was originally adopted, the 30-day recency of experience provision was considered essential to safety since helicopter air transportation was a new industry without any appreciable background of experience to draw upon. However, since that time, acceptable operating practices have been developed, training programs have been established, and additional helicopter experience has been gained.

Helicopter operations are primarily short-haul operations requiring a great many takeoffs and landings. These numerous takeoffs and landings provide the pilot with a wide variation of operational experience. They also serve to develop to a very high degree the particular skills and techniques which are necessary to accomplish these manuevers. It is reasonable to assume, therefore, that these highly developed skills and techniques will not deteriorate to an unsatisfactory degree if not utilized during a time interval as short as 90 days. In addition, this extension of time for pilot recency of experience will bring Part 46 in line with Parts 40, 41, and 42 in that these parts require a minimum of 3 takeoffs and landings in each 90-day period to maintain pilot recency of experience requirements.

The draft release also proposed to relax the existing provisions contained in § 46.301 by requiring that only pilots in command accomplish simulated one-engine-inoperative landings periodically. After due consideration of this proposal and in light of the comments received, it has been determined that an adequate level of safety can only be maintained if all pilots scheduled to serve in helicopter air transportation periodically accomplish simulated one-engine-inoperative landings. Helicopter operations are normally conducted at relatively low altitudes. As a result of this type of operation, the time interval for executing an engine-inoperative landing is very limited. This very limited time interval dictates that both of the pilots in two-pilot crews be proficient in executing this emergency manuever since the two-pilot-crew concept has developed the

acceptable practice of alternating pilot duties other than the function of command. Furthermore, it is imperative that the pilot serving as second in command on helicopters requiring two pilots be qualified to assume command of the helicopter in the event of sudden incapacitation of the pilot in command. As defined in Part 7 of the Civil Air Regulations, Rotorcraft Airworthiness; Transport Categories, "An autorotative landing is any landing of a rotorcraft in which the entire maneuver is accomplished without the application of power to the rotor." In the case of single-engine helicopters, the loss of operation of the engine results in an autorotative landing, but in the case of multiengine helicopters, the loss of operation of one engine does not result in an autorotative landing. However, in both single-engine and multiengine helicopters, the autorotative or one-engine-inoperative landing is an emergency maneuver which requires periodic practice to retain pilot proficiency. In view of the above, it is determined essential to safety to require any pilot scheduled by an air carrier to serve as a pilot in helicopter air transportation to accomplish at least 2 simulated one-engine-inoperative or autorotative landings every 90 days.

Relative to the proposal contained in the draft release to relax the existing requirement for a simulated one-engine-inoperative landing at night, it has been determined that safety would be impaired if such a proposal were adopted. As stated above, helicopter operations are normally conducted at low altitudes. At night, at these low altitudes, it becomes more difficult to distinguish terrain features and judge distance accurately against a

background of both stationary and moving surface lights. Furthermore, although some of the heliports are illuminated with lighting specifically designed for heliports, other lights in the vicinity may distort the lighting contrast and produce indefinite silhouettes of the surrounding buildings in close proximity to the helicopter on its final approach and landing. Therefore, unless a pilot has had recent helicopter night landing experience, this distortion of light contrast and lack of clearly defined terrain features may impair his judgement of distance and may affect his depth perception, thus making a one-engine-inoperative/or autorotative landing at night most difficult. Accordingly, pilots engaged in helicopter operations at night should be experienced in performing this emergency maneuver at night. In view of the above and in conjunction with comments received, it is determined to be in the interest of safety to continue the present requirement that at least one of the 2 one-engine-inoperative/or autorotative landings required each 90 days be performed during the hours of darkness if the pilot is scheduled to fly in night helicopter air transportation.

It was determined that the phrase "within the preceding 90 days" contained in § 46.303(c) was unnecessary because of the requirement in § 46.304 that a pilot who has been absent from a route or a heliport on the route for a period in excess of 3 months must comply with all the provisions of § 46.303(c) before acting as pilot in command on that route. Therefore, the phrase is being deleted.

The 30-day requirement presently contained in § 46.304(b) is being changed to 3 months to conform with the original route and heliport qualifications inasmuch as the maintenance of these qualifications should not be

more stringent than the original qualifications. The present rule requires that all pilots serving in night operations maintain or reestablish route and heliport qualifications during daylight hours. While it was proposed to relax this requirement so as to be applicable only in the case of passenger-carrying operations, such a requirement is also considered essential to safety for all night operations. Obstructions, and changes occurring to such obstructions, along the route and on the approaches to heliports the on/route are equally important to all helicopter pilots serving as pilot in command in all night operations. These obstructions and any changes occurring thereto can best be observed during daylight hours. Accordingly, a periodic daylight flight will insure that each pilot in command serving in night operations is continually familiar with the location and size of such obstructions. In view of the above and in consideration of the comments received, each pilot utilized as pilot in command in night operations will be required to make at least one trip during daylight hours every 3 months as pilot or other member of a flight crew between terminals into which he is scheduled to fly.

Interested persons have been afforded an opportunity to participate in the making of this regulation (26 F.R. 8464), and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 46 of the Civil Air Regulations (14 CFR Part 46, as amended) is hereby amended as follows, effective August 21, 1962 :

1. By amending § 46.301 to read as follows:

46.301 Pilot recent experience. No air carrier shall schedule a pilot to serve as a pilot in scheduled air transportation unless within the preceding 90 days he has made at least 3 takeoffs and at least 3 landings in a helicopter of the particular type on which he is to serve; 2 of these landings shall be made from approaches with a simulated one-engine-inoperative condition in multiengine helicopters, or, in autorotation in single-engine helicopters; and, if the pilot is scheduled to serve in night air transportation, at least 1 of the 2 simulated one-engine-inoperative or autorotative landings shall have been made during hours of darkness.

2. By amending § 46.303(c) to read as follows:

46.303 Pilot route and heliport qualification requirements.

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(c) Each such pilot shall make an entry as a member of the flight crew at each heliport into which he is to fly. The entry shall include a landing and takeoff under day HVR weather conditions to permit the qualifying pilot to observe the heliport, surrounding terrain, and any obstructions to landings and takeoffs. The qualifying pilot shall occupy a seat in the pilot compartment and shall be accompanied by a pilot qualified at the heliport.

3. By amending § 46.304 to read as follows:

46.304 Maintenance and reestablishment of pilot route and heliport qualifications for particular trips.

(a) To maintain pilot route and heliport qualifications, each pilot being utilized as pilot in command shall have made, within the preceding

3-month period, at least one trip, as pilot or other member of a flight crew, between the terminals into which he is scheduled to fly. In order to maintain qualification for night operations, this trip must have been made during the hours of daylight.

(b) In order to reestablish pilot route and heliport qualifications after absence from a route or a heliport thereon for a period in excess of 3 months, a pilot shall comply with the provisions of § 46.303.

(Secs. 313(a), 601, 604, 605; 72 Stat. 752, 775, 778; 49 U.S.C. 1354, 1421, 1424, 1425)

Administrator

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