DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 1, 60, 61, 63, 65, 91, 121, 135, and 141

[Docket No.: FAA–2016–6142; Amdt. Nos. 1–73, 60–6, 61–142, 63–41, 65–58, 91–351, 121–381, 135–140, 141–20]

RIN 2120–AK28

Regulatory Relief: Aviation Training Devices; Pilot Certification, Training, and Pilot Schools; and Other Provisions

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This rulemaking relieves burdens on pilots seeking to obtain aeronautical experience, training, and certification by increasing the allowed use of aviation training devices. Use of these training devices has proven to be an effective, safe, and affordable means of obtaining pilot experience. This rulemaking also addresses changing technologies by accommodating the use of technically advanced airplanes as an alternative to the use of older complex single engine airplanes for the commercial pilot training and testing requirements. Additionally, this rulemaking broadens the opportunities for military instructor pilots or pilot examiners to obtain civilian ratings based on military experience, expands opportunities for logging pilot time, and removes a burden from sport pilot instructors by permitting them to serve as safety pilots. Finally, this rulemaking includes changes to some of the provisions established in an August 2009 final rule. These actions are necessary to bring the regulations in line with current needs and activities of the general aviation training community and pilots.

DATES: This rule is effective July 27, 2018, except for the amendments to §§ 61.31(e)(2) and (f)(2), 61.129(a)(3)(ii), (b)(3)(ii) and (j), 61.197, 61.199, 61.412, 61.415, 91.109, and appendix D to part 141, which are effective August 27, 2018; the amendments to §§ 61.1 (amendatory instruction 10 revising the definition of ''Pilot time''), 61.39, 61.51(e) and (f), 61.57(c), 61.159(a), (c), (d), (e), and (f), 61.161(c), (d), and (e), 135.99, and 141.5(d) which are effective November 26, 2018; and the amendments to §§ 61.3, 63.3, 63.16, 91.313, 91.1015, 121.383, and 135.95, which are effective December 24, 2018.

ADDRESSES: For information on where to obtain copies of rulemaking documents and other information related to this final rule, see ''How to Obtain Additional Information'' in the **SUPPLEMENTARY INFORMATION** section of this document.

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List of Abbreviations Frequently Used in This Document

AATD—Advanced aviation training device
AC—Advisory Circular
ATD—Aviation training device
ATP—Airline transport pilot
BATD—Basic aviation training device
CFI—Certificated flight instructor
FFS—Full flight simulator
FTD—Flight training device
FSTD—Flight simulation training device
ICAO—International Civil Aviation Organization
IFR—Instrument flight rules
IPC—Instrument proficiency check
LOA—Letter of authorization
LODA—Letter of deviation authority
MFD—Multi-function display
NPRM—Notice of proposed rulemaking
PFD—Primary flight display
PIC—Pilot in command
SIC—Second in command
TAA—Technically advanced airplane
VFR—Visual flight rules

I. Executive Summary

On May 12, 2016, the FAA published a notice of proposed rulemaking (NPRM) titled ''Regulatory Relief: Aviation Training Devices; Pilot Certification, Training, and Pilot Schools; and Other Provisions.'' [1] In the

[1] 81 FR 29720.

NPRM, the FAA proposed amendments to reduce or relieve existing burdens on the general aviation community. Several of the proposed changes resulted from suggestions from the general aviation community through petitions for rulemaking, industry/agency meetings, and requests for legal interpretation. The proposed changes would have increased the use of aviation training devices (ATDs), flight training devices (FTDs), and full flight simulators (FFSs); expanded opportunities for pilots in part 135 operations to log flight time; allowed an alternative to the complex airplane requirement for commercial pilot training; and permitted pilots to credit some of their sport pilot training toward a higher certificate.

Table 1 summarizes the provisions proposed in the NPRM, the changes being made to those provisions in this final rule, the Code of Federal Regulations sections affected, and the total cost savings (benefits) for a 5-year analysis period. All of the provisions in this rule are either relieving or voluntary. For those provisions that are relieving, no person affected is anticipated to incur any costs associated with the relieving nature of the provision. The FAA assumes that as these provisions are relieving, all persons affected will use the provisions as they will be beneficial. For those provisions that are voluntary, persons who wish to use the new provisions will do so only if the benefit they would accrue from their use exceeds any cost they might incur to comply with the new provision.

TABLE 1—SUMMARY OF PROPOSED PROVISIONS AND CHANGES FROM NPRM

Provision	Summary of NPRM provision	Significant changes from NPRM	14 CFR §§ affected	Summary of costs/benefits
Aviation Training Devices				
Instructor requirement when using an FFS, FTD, or ATD to complete instrument recency.	Remove the requirement to have an instructor present when accomplishing flight experience requirements for instrument recency in an FAA-approved FFS, FTD, or ATD.	No longer describes the training devices as ''approved''.	61.51(g)	2016$–$12.5M. PV = Present Value. PV-3%—$11.4M. PV-7%—$10.3M.
Instrument recency experience requirements.	Reduce frequency of instrument recency flight experience accomplished exclusively in ATDs from every two months to every six months. Reduce number of tasks and remove three-hour flight time requirement when accomplishing instrument recency flight experience in ATDs.	Allows any combination of aircraft, FFS, FTD, or ATD to satisfy the instrument recency requirements. No longer describes the training devices as ''approved''.	61.57(c)	2016$–83.1M. PV-3%—$76.1M. PV-7%—68.2M.
Pilot Certification, Training, and Pilot Schools				
Second in command for part 135 operations.	Allow a pilot to log SIC flight time in a multiengine airplane in a part 135 operation that does not require an SIC.	Adds the option to use a single-engine turbine-powered airplane in an approved SIC PDP. No longer requires the PIC to be a part 135 flight instructor. Adds crew pairing requirements to ensure the PIC is qualified and has completed mentoring training. Allows a pilot to log SIC time obtained in part 91 operations conducted in accordance with the certificate holder's OpSpec. Allows pilots to credit SIC time logged under a SIC PDP toward the specific flight time requirements for ATP certification.	61.1; 61.39(a); 61.51(e), (f); 61.159; 61.161(c), (d), (e); 135.99(c), (d).	Minimal Cost Savings—Not Quantified.
Instrument recency experience for SICs serving in Part 135 operations.	Remove the reference to part 61 in § 135.245(a) and add the current instrument experience requirements in § 61.57(c)(1) and (2) to new § 135.245(c).	Allows any combination of aircraft and FSTD to satisfy the SIC instrument recent experience requirements. Includes an option for part 135 SICs to reestablish instrument recency.	135.245	Minimal Cost Savings—Not Quantified.

TABLE 1—SUMMARY OF PROPOSED PROVISIONS AND CHANGES FROM NPRM—Continued

Provision	Summary of NPRM provision	Significant changes from NPRM	14 CFR §§ affected	Summary of costs/benefits
Completion of commercial pilot training and testing in technically advanced airplanes (TAA).	Allow TAA to be used to meet some or all of the currently required 10 hours of training that must be completed in a complex or turbine-powered airplane for the single engine commercial pilot certificate. TAA could be used in combination with, or instead of, a complex or turbine-powered airplane to meet the aeronautical experience requirement and could be used to complete the practical test.	Includes a general definition of TAA in § 61.1, and relocates the TAA requirements from the proposed definition to new § 61.129(j). Revises the proposed requirements for TAAs to accommodate existing and new technology. Allows a person to use any combination of turbine-powered, complex or technically advanced airplanes to satisfy the training requirement. Clarifies that the option to use a TAA applies to all commercial pilot applicants for a single-engine class rating (land and sea). Adds an exception to § 61.31(e) and (f) to allow a competency check under part 135 to meet the requirements for training in complex or high performance airplanes facilitating PIC operations. In Notice N 8900.463, *Use of a Complex Airplane During a Commercial Pilot or Flight Instructor Practical Test,* the FAA implemented a policy change that allows any single engine airplane to be used for the commercial pilot and flight instructor practical tests.	61.1; 61.129(a)(3)(ii), (j); appendix D to part 141 61.31(e) and (f).	2016$–$3.1M. PV-3%—$2.8M. PV-7%—$2.6M.
Flight instructors with instrument ratings only.	Remove the requirement that instrument only instructors have category and class ratings on their flight instructor certificates to provide instrument training.	Requires an instrument only instructor to possess an airplane category multiengine class rating on his or her flight instructor certificate when providing instrument training in a multiengine airplane.	61.195(b), (c)	Minimal Cost Savings—Not Quantified.
Sport pilot flight instructor training privilege.	Allow a sport pilot only instructor to provide training on control and maneuvering solely by reference to the flight instruments (for sport pilot students only).	Allows sport pilot instructors to receive the training required by § 61.412 in an ATD. Allows instrument only instructors to provide the training and endorsement required by § 61.412 to sport pilot instructors.	61.412; 61.415(h); 91.109(c).	Minimal Cost Savings—Not Quantified.
Credit for training obtained as a sport pilot.	Allow a portion of sport pilot training to be credited for certain aeronautical experience requirements for a higher certificate or rating.	Allows all training received from a sport pilot instructor to be credited towards a higher certificate or rating. Allows training received from a sport pilot instructor on the control and maneuvering of an aircraft solely by reference to the instruments to be credited towards a private pilot certificate, provided the sport pilot instructor satisfies § 61.412.	61.99; 61.109(l)	2016$–$14.0M. PV-3%—$13.3M. PV-7%—$12.3M.
Include special curricula courses in renewal of pilot school certificate.	Allow part 141 pilot schools to count FAA approved ''special curricula'' course completions (graduates of these courses) toward certificate renewal requirements.	No changes	141.5(d)	Minimal Cost Savings—Not Quantified.

TABLE 1—SUMMARY OF PROPOSED PROVISIONS AND CHANGES FROM NPRM—Continued

Provision	Summary of NPRM provision	Significant changes from NPRM	14 CFR §§ affected	Summary of costs/benefits
Other Provisions				
Temporary validation of flightcrew members' certificates.	Allow a confirmation document issued by a part 119 certificate holder authorized to conduct operations under part 121 or 135 to serve as a temporary verification of the airman certificate and/or medical certificate during operations within the United States for up to 72 hours.	Adds language to also allow part 91, subpart K program managers to issue temporary verification documents.	61.3; 63.3; 63.16; 91.1015(h); 121.383; 135.95.	Minimal Cost Savings—Not Quantified.
Military competence for Flight Instructors.	Allow the addition of a flight instructor rating based on military competency to ''simultaneously qualify'' for the reinstatement of an expired FAA flight instructor certificate.	Revises reinstatement requirements to accurately reflect the process by which a military instructor pilot acquires an additional aircraft rating qualification. Provides military instructor pilots two options for reinstatement, consistent with the reinstatement requirements for civilian holders of expired flight instructor certificates.	61.197; 61.199	Minimal Cost Savings—Not Quantified.
Restricted Category Aircraft type training and testing allowances.	Allow an operator to request and obtain a letter of deviation authority to conduct training and testing and other directly related activities for employees to obtain a type rating in a restricted category aircraft.	Removes proposed requirement that personnel receiving flight crewmember training in special purpose operations be employed by the operator providing the training. Specifies that relocation flights include delivery and repositioning flights.	91.313	Minimal Cost Savings—Not Quantified.
Single Pilot Operations of Former Military Airplanes and Other Airplanes with Special Airworthiness Certificates.	Allow pilots to operate certain large and turbojet-powered airplanes (specifically former military and some airplanes not type certificated in the standard category) without a pilot who is designated as SIC.	Revised to accommodate the new airplane certification levels adopted in the part 23 final rule.	91.531	Minimal Cost Savings—Not Quantified.

II. Authority for This Rulemaking

The FAA's authority to issue rules on aviation safety is found in Title 49 of the United States Code (49 U.S.C.). 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 49 U.S.C. 106(f), which establishes the authority of the Administrator to promulgate regulations and rules; 49 U.S.C. 44701(a)(5), which requires the Administrator to promote safe flight of civil aircraft in air commerce by prescribing regulations and setting minimum standards for other practices, methods, and procedures necessary for safety in air commerce and national security; and 49 U.S.C. 44703(a), which requires the Administrator to prescribe regulations for the issuance of airman certificates when the Administrator finds, after investigation, that an individual is qualified for, and physically able to perform the duties related to, the position authorized by the certificate.

III. Discussion of the Final Rule

On May 12, 2016, the FAA published a NPRM proposing a variety of provisions intended to provide relief from regulatory burdens to the general aviation community, commercial pilots, military flight instructors, and those using new technology in aviation. The FAA proposed changes in 12 different subject areas to 14 CFR parts 61, 63, 91, 121, 135, and 141.

The FAA received and considered a total of 100 comments to the NPRM. Commenters included 63 individuals, 15 aviation-related companies, and 12 aviation-related organizations. Several commenters provided more than one comment. The majority of commenters supported various proposed provisions, and many recommended changes to the proposed rule language. While there was opposition to some provisions, no commenters opposed the NPRM in its entirety.

Because of the specific nature of each provision, the FAA discusses each provision separately.

A. Aviation Training Devices

This final rule amends the regulations governing the use of aviation training devices (ATDs). As stated in the NPRM,[2] the FAA approves ATDs for use in pilot certification training under the authority provided in 14 CFR 61.4(c). Title 14 of the Code of Federal Regulations (14 CFR) part 60 governs the qualification of flight simulation training devices (FSTD), which include full flight simulators (FFSs) levels A through D and flight training devices (FTDs) levels 4 through 7. As discussed in the following sections, the FAA is: (1) Adding a definition of ATD in § 61.1; (2) removing the requirement for an

[2] 81 FR at 29723.

instructor to be present when a pilot accomplishes his or her instrument recency in an FFS, FTD, or ATD; and (3) amending the regulations to allow pilots to accomplish instrument recency experience in ATDs at the same interval allowed for FFSs and FTDs.

1. Definition of Aviation Training Device

The FAA proposed to define ATD as a training device, other than a FFS or FTD, that has been evaluated, qualified, and approved by the Administrator.[3] The FAA proposed to add this definition to § 61.1 to differentiate ATDs from FFSs and FTDs qualified under part 60 and to establish that an ATD must be evaluated, qualified, and approved by the Administrator to be used to meet aeronautical experience requirements under part 61.

The FAA received 3 comments on the proposed definition of ''aviation training device.''

The Society of Aviation and Flight Educators (SAFE) concurred with the proposal. The Aircraft Owners and Pilots Association (AOPA), however, recommended removing the words ''evaluated'' and ''qualified'' from the proposed definition because they are redundant with ''approved'' and because the FAA may, at times, only need to ''approve'' a previously approved ATD model.

The FAA is retaining the terms ''evaluated'' and ''qualified'' because the evaluation and qualification of an ATD are important parts of the approval process. An ATD is evaluated and qualified before it is approved under § 61.4(c).[4] Evaluating and qualifying ATDs validates their effectiveness for successful training. In response to AOPA's comment regarding previously approved ATD models, the FAA finds that defining an ATD, in part, as ''evaluated, qualified, and approved'' will not adversely affect the use of ATD models that have been previously approved. Unlike FSTD which must be individually qualified under part 60, the FAA has permitted the use of ATDs that have been produced identical to the model evaluated, qualified, and approved utilizing a standard letter of authorization (LOA) for over 12 years. After the FAA provides initial approval of a specific model, that approval covers production of additional identical models by the manufacturer. However, the FAA reserves the right to re-evaluate any ATD used to meet pilot certification or experience requirements.[5] Additional conditions and limitations in the LOAs explain that any changes or modifications made to the ATD that have not been approved in writing by the General Aviation and Commercial Division may terminate the LOA.

An individual commenter asked the FAA to clarify whether the definition eliminates the basic ATD and advanced ATD categories described in Advisory Circular (AC) 61–136. The individual also asked the FAA to update the related guidance and advisory materials with this clarification.

The ATD definition does not eliminate the qualification of an ATD as basic or advanced. The FAA is adding a general definition of ATD to § 61.1 to differentiate ATDs from FFSs and FTDs qualified under part 60 and to establish that an ATD must be evaluated, qualified, and approved by the Administrator. The FAA will continue to provide guidance in AC 61–136, as amended, to qualify an ATD as basic or advanced. Comparatively, the definition in part 1 for a FTD does not delineate qualification levels.[6]

The FAA notes that current regulations in parts 61 and 141 expressly differentiate instrument training time allowances for ''basic'' verses ''advanced'' ATDs.[7] FAA Order 8900.1, Volume 11, Chapter 10, Section 1, *Aviation Training Device* also describes different allowances for basic and advanced ATDs. The FAA provides an LOA for each training device that specifies the level of approval (*i.e.,* basic or advanced) for the ATD and the allowable credits, thereby mitigating any concern about understanding the different allowances.

The FAA is adopting the definition of ATD in § 61.1 as proposed.

In commenting on the ATD definition, AOPA noted that the definition of flight simulation training device (FSTD) is inconsistent between part 1 and part 60. AOPA recommended revising the part 1 definition to conform with the part 60 definition by adding the word ''full'' before ''flight simulator.''

The FAA is adopting AOPA's recommendation, which is consistent with the FAA's proposal to replace the words ''flight simulator'' with the words ''full flight simulator'' wherever they appear in the sections the FAA determined needed to be revised.[8]

2. Instructor Requirement When Using a Full Flight Simulator, Flight Training Device, or Aviation Training Device To Complete Instrument Recency Experience

In the NPRM, the FAA proposed to amend § 61.51(g) by revising paragraph (g)(4) and adding a new paragraph (g)(5) to allow a pilot to accomplish instrument recency experience when using a FFS, FTD, or ATD without an instructor present, provided a logbook or training record is maintained to specify the approved training device, time, and the content as appropriate.[9] Under the proposal, a pilot would still have been required to have an instructor present when using time in a FFS, FTD, or ATD to acquire instrument aeronautical experience for a pilot certificate or rating.

The FAA received 27 comments, 9 from organizations and 18 from individuals. The majority of commenters overwhelmingly supported the proposal noting various benefits, including reduced costs for pilots, less time commitment, reduced airspace use and congestion, increased number of instrument current pilots, and increased pilot proficiency and safety. Several commenters noted how the use of FFSs, FTDs, and ATDs enhances training by allowing more opportunities to practice important skills and experience a variety of approaches, conditions, and equipment failures.

As stated in the NPRM,[10] because instrument recency experience is not training, the FAA no longer believes it is necessary to have an instructor present when instrument recency experience is accomplished in an FSTD

[3] Prior to this final rule, an ATD was defined in FAA guidance but not in the regulations. AC 61–136A defines ATD as a training device, other than a FFS or FTD, that has been evaluated, qualified, and approved by the Administrator. This final rule codifies the definition in § 61.1.

[4] See AC–61–136A, FAA Approval of Aviation Training Devices and Their Use for Training and Experience (November 17, 2014).

[5] See FAA Order 8900.1, Vol. 11, Ch. 10, Sec. 1, Para. 11–10–1–19 Inspector Oversight (explaining how the jurisdictional FSDO may conduct an inspection or surveillance of any FAA-approved ATD located within its geographical area that an owner or operator uses to satisfy experience or training requirements for pilot certificates or ratings).

[6] 14 CFR part 1 defines ''flight training device'' as a replica of aircraft instruments, equipment, panels, and controls in an open flight deck area or an enclosed aircraft cockpit replica. It includes the equipment and computer programs necessary to represent aircraft (or set of aircraft) operations in ground and flight conditions having the full range of capabilities of the systems installed in the device as described in part 60 of the chapter and the qualification performance standard (QPS) for a specific FTD qualification level.

[7] See 14 CFR 61.65(h)(2)(i), 141.41(b), and appendix C to part 141.

[8] 81 FR at 29745.

[9] Prior to this final rule, § 61.51(g)(4) required a pilot accomplishing instrument recency experience in an FFS, FTD, or ATD to have an authorized instructor present to observe the time and sign the pilot's logbook. The FAA notes that a pilot who performs instrument recency in an aircraft, however, is not required to have an instructor present to observe the time.

[10] 81 FR at 29724.

or ATD. The FAA is therefore removing the requirement for an authorized instructor to be present when a pilot accomplishes his or her instrument recency experience in an FFS, FTD, or ATD, as proposed. The FAA is, however, slightly revising the proposed rule language by removing the word ''approved'' because an FFS or FTD used to satisfy § 61.51(g)(5) is qualified, not approved, by the National Simulator Program under part 60.[11] Furthermore, § 61.51(g)(4) retains the requirement for an authorized instructor to be present in an FSTD or ATD when a pilot is logging training time to meet the aeronautical experience requirements for a certificate or rating.[12]

As with instrument recency experience accomplished in an aircraft, § 61.57(c) requires the pilot to log the required tasks in his or her logbook and § 61.51(b) requires certain information to be logged, including the type and identification of the FSTD or ATD.[13] Additionally, § 61.51(g)(5) requires the pilot to maintain a logbook or training record [14] that specifies the training device, time, and content. The FAA therefore emphasizes the importance of clearly documenting in one's logbook the type and identification of the FFS, FTD, or ATD used to maintain recency and a detailed record of the specific tasks completed.[15] For ATDs, the FAA recommends retaining a copy of the FAA Letter of Authorization (LOA) for the ATD used because the LOA contains the type and model of the ATD that must be documented in the pilot's logbook.[16]

The Aircraft Owners and Pilots Association (AOPA), National Air Transportation Association (NATA), Redbird, Society of Aviation and Flight Educators (SAFE), and four individuals, who identified as either pilots or instructors, generally commented that bringing FFS, FTD, and ATD instrument recency requirements in line with the requirements when using an actual aircraft makes sense. These commenters indicated that if a pilot can be trusted to log instrument recency in an aircraft without an instructor present, then he or she should be trusted to do the same in an FFS, FTD, or ATD.

Four commenters expressed concern, however, that there is potential for falsification of logbook entries by pilots if they are not supervised when using an FFS, FTD, or ATD to satisfy instrument recency requirements. To reduce the risk of falsification, one individual recommended that FAA require the simulator to produce a flight track and log all pilot activities and actions during the simulator session. The commenter recommended that the flight school keep this documentation, and the pilot retain a copy of this simulator session to support the logbook entry to satisfy the instrument recency experience requirement.

Because instructor supervision is not required when a pilot satisfies the instrument recency experience in an aircraft,[17] similarly, it should not be required when a pilot satisfies the same instrument recency experience in a FFS, FTD, or ATD. A pilot must perform and log the required tasks regardless of whether the tasks are accomplished in an aircraft, FFS, FTD, or ATD.[18] As several commenters noted, pilots who satisfy the instrument recency experience in an FFS, FTD, or ATD should be trusted in the same fashion as those pilots who satisfy the requirements in an aircraft. While there is a potential for falsification in both scenarios, the FAA finds that the current penalties for falsifying pilot logbooks and records, which include suspension or revocation of one's airman certificate, are a sufficient deterrent to falsifying the logging requirements.[19] The FAA notes that falsifying a logbook entry would also be a criminal violation of 18 U.S.C. 1001.[20] Given the deterrence that is currently in place for the falsification of records, the FAA finds it unnecessary to require instructor supervision when a pilot satisfies the instrument recency experience in an FFS, FTD, or ATD. Furthermore, the FAA is not requiring the FFS, FTD, or ATD to produce a flight track and log pilot activities as proof of performing the required tasks for maintaining instrument recency; nor is the FAA imposing more stringent recordkeeping requirements on the flight schools who own such FFS, FTD, or ATDs or on the pilots who use the FFS, FTD, or ATD to maintain instrument recency. These suggestions are outside the scope of this rulemaking.

American Flyers and several individuals asserted that using an FFS, FTD, or ATD to satisfy instrument recency requirements, particularly without an instructor present, is not comparable to operating an aircraft. The individual commenters noted that with FFSs, FTDs, or ATDs, there is no spatial disorientation, nothing truly unexpected, no other aircraft, no equipment problems, no approach changes, no interaction from air traffic control, no threat to life, and rules can be violated. Two individuals noted that an instructor could introduce some of these variables in an FSTD or ATD. One individual recommended the FAA require a flight instructor to introduce real-world scenarios in an ATD as part of the instrument recency requirements.

The FAA finds that satisfying instrument recency experience requirements in an FFS, FTD or ATD is as beneficial as satisfying the requirements in an aircraft regardless of whether an instructor is present. FFSs, FTDs, and ATDs are specifically designed to allow a person to replicate and execute instrument tasks just as they would in an aircraft. The FAA qualifies FFSs and FTDs under 14 CFR part 60, and the FAA evaluates, qualifies and approves ATDs under the authority provided in 14 CFR 61.4(c) using specific standards and criteria described in AC 61–136 (as amended) as one means of compliance. Additionally, the FAA accomplishes on site functional evaluations of ATDs verifying that they successfully emulate instrument tasks accurately.[21] The FAA further notes that the regulations do not require a pilot to experience the variables mentioned by the commenters

[11] FFSs and FTDs are qualified by the National Simulator Program under part 60. FFSs and FTDs are subsequently approved by a principal operations inspector (POI) or training center program manager (TCPM) for use in a training program. When an FFS or FTD is used outside of a training program, an FFS or FTD is not approved by the FAA; it is only qualified by the National Simulator Program under part 60. Therefore, not all FSTDs used to satisfy § 61.51(g)(5) will be approved. ATDs are approved by letter of authorization from AFS–800, The General Aviation and Commercial Division.

[12] 14 CFR 61.51(g)(4), 61.65, 61.129.

[13] 14 CFR 61.51(b)(1)(iv).

[14] Although recent flight experience is not training, the required maneuvers may be accomplished as part of a training program. As such, the experience may be logged in a training record rather than a logbook.

[15] 14 CFR 61.51(b) and (g)(5). For ATDs, the type and identification of the device will be the manufacturer name and model, which is identified on the LOA for the ATD approval. All qualified FFSs and FTDs will have an FAA identification number.

[16] The FAA notes that FFSs and FTDs are not issued LOAs. Rather, an FFS or FTD is issued a Statement of Qualification (SOQ), which will contain the FAA identification number. 14 CFR 60.15(g). The SOQ must be posted in or adjacent to the FSTD. 14 CFR 60.9(b)(2).

[17] As discussed further in this section, the purpose of the instrument recency experience requirement is to ensure the pilot maintains his or her instrument proficiency by performing and logging the required instrument experience. A pilot who accomplishes instrument recency experience is already instrument-rated. Therefore, the FAA expects pilots accomplishing the instrument recency experience to already be at an acceptable level of proficiency.

[18] 14 CFR 61.57(c)(1).

[19] 14 CFR 61.59.

[20] Sec. 1001 prescribes penalties for falsification offenses.

[21] FAA Order 8900.1, Vol. 11, Ch. 10 Aviation Training Device, Sec. 1 Approval, Oversight, and Authorized Use Under 14 CFR parts 61 and 141.

as part of the required tasks for maintaining instrument recency.[22] The variables identified by the commenters consist of conditions and events that are more specific to training, a practical test, or an instrument proficiency check.

Several commenters, including the Lancair Owners and Builders Organization (LOBO), stated that having an instructor present in the FSS, FTD or ATD improves the pilot's proficiency. A few individuals stated that a pilot may need additional training and not realize it without an instructor present. However, one individual asserted that if a pilot has obtained a certificate after completing the minimum hours with an instructor and remains current, there is no requirement for additional training.

Section 61.57(c) requires a pilot to perform and log minimum tasks to maintain instrument recency; § 61.57(c) does not impose training or proficiency requirements. An instrument-rated pilot has already demonstrated his or her proficiency during a practical test with an examiner. The purpose of the instrument recency experience requirement is to ensure the pilot maintains his or her instrument proficiency by performing and logging the required instrument experience. Therefore, the FAA expects pilots accomplishing the instrument recency experience to already be at an acceptable level of proficiency. The FAA recommends, however, that a pilot seek additional training if he or she is uncomfortable with his or her performance of the required tasks under § 61.57(c).

LOBO recommended requiring pilots to complete an annual instrument proficiency check with an instrument flight instructor.

The FAA requires an instrument proficiency check only when a pilot has failed to meet the recent instrument experience requirements for more than six calendar months.[23] The recommendation to require an instrument proficiency check every year is beyond the scope of this rulemaking and unnecessary if the pilot is maintaining his or her instrument recency in accordance with the regulations.

Two individuals asserted that there is no cost savings when one takes into account the cost of a crash, including the cost of a human life, property damage, and medical treatment for survivors.

For the reasons stated above, the FAA disagrees with the assertion that removing the requirement for an instructor to be present in an FSTD or ATD will result in a decrease in safety. Pilots may accomplish the required tasks under § 61.57(c) in an aircraft in actual instrument conditions without an instructor present. Allowing pilots to accomplish the same tasks in an FSTD or ATD without an instructor present does not reduce the level of safety.

LOBO questioned the accuracy of the FAA's estimates of cost savings, noting that the FAA may be overestimating the number of pilots that use an FFS, FTD, or ATD, to maintain instrument recency. LOBO claimed that although the percentage of pilots who possess instrument ratings is quite high, non-scientific polling by AOPA indicates many of them are not instrument current. LOBO noted that the FAA estimated that removing the requirement for a flight instructor to be present would generate a total savings of $10.6 million (present value), or $2.4 million annually, all other factors remaining the same. Given there has been no polling of the U.S. pilot population for training, experience, etc. by the FAA since 1990, LOBO questioned the accuracy of these estimates.

The Regulatory Evaluation in the NPRM estimated that implementation of this rule provision would result in present value cost savings of $10.6 million over a five-year period at a 7 percent discount rate. Because the FAA does not require pilots to report instrument experience data and capturing such data is difficult if not impossible, the FAA made a conservative estimate of the cost savings. This is a conservative estimate because it reflects that a significant number of pilots do not maintain instrument recency in general. The FAA estimated the number of pilots who might benefit from this rule provision by starting with the total number of instrument rated pilots in the United States as of June 30, 2015. This was 305,976 instrument rated pilots. This number included airline transport pilots (ATPs). However, under § 61.57(e), pilots employed by part 119 certificate holders conducting operations under part 121 or part 135 are excepted from the instrument recency experience requirement in § 61.57(c). As of June 23, 2015, the FAA estimated that 104,424 air carrier pilots were excepted. This left 201,552 instrument rated pilots that could potentially benefit from this rule provision. Of these pilots, the FAA estimated that only approximately 50 percent (100,776) were maintaining their recency. Of this group, the FAA estimated that only 25 percent (25,194) used an FFS, FTD, or ATD for recency and would potentially benefit from this rule provision. At an average instructor rate of $24 per hour for an estimated 4 hours per year, the FAA estimated that it would cost about 2.4 million dollars per year for 25,194 pilots to complete the recency requirement. These estimates indicate that only 12.5 percent of instrument rated pilots (excluding air carrier pilots) would benefit from this rule provision. The FAA finds this to be a reasonably conservative estimate.

Furthermore, FAA notes that LOBO did not provide any alternative estimates, LOBO relied on non-scientific polling from AOPA, and LOBO failed to provide any substantiated statistics. The FAA believes new § 61.51(g)(5) will significantly reduce cost to the public. As described in the NPRM, the FAA believes that new § 61.51(g)(5) will likely increase the public's use of FFSs, FTDs or ATDs and notes that the majority of comments supported this conclusion. Because the FAA is adopting § 61.51(g)(4) and (5) as proposed and no alternative estimates were provided, there will be no change to the NPRM methodology used for this estimate.

As a general matter, the FAA notes that ATDs allow programming and practice of many instrument situations, scenarios, and procedures. The current capabilities of ATDs, FTDs, and FFSs allow an instrument rated pilot to program and successfully practice simulated low visibility weather conditions, multiple approaches in a shorter period of time, emergency procedures, equipment failures, and other various flight scenarios that cannot necessarily be accomplished in an aircraft safely. Allowing the use of ATDs, FTDs and FFSs without the requirement (and therefore the cost) of having an instructor present can result in more pilots being better prepared. This benefit could include executing flight scenarios they may not normally experience when accomplishing instrument recency in an aircraft, or in locations where they do not normally fly, or when practicing emergency procedures that are likely too dangerous to accomplish in an aircraft. This includes the unique capability of practicing identical instrument approach procedures to an airport the pilot may not have otherwise flown to before.

Other than removing the term ''approved'' from the proposed rule language, as explained above, § 61.51(g)(4) and (5) remain unchanged from the proposal.

[22] 14 CFR 61.57.

[23] 14 CFR 61.57(d).

3. Instrument Recency Experience Requirements

In the NPRM, the FAA proposed to amend § 61.57(c) to allow pilots to accomplish instrument experience in ATDs at the same 6-month interval allowed for FFSs and FTDs.[24] Additionally, for pilots who opt to use ATDs exclusively to accomplish instrument recency experience, the FAA proposed to no longer require an additional 3 hours of instrument experience and additional tasks to remain current.[25] The FAA also proposed to allow completion of instrument recency experience in any combination of aircraft, FFS, FTD, or ATD.

Ten commenters, including Redbird, American Flyers, and Eagle Sport, supported the proposal without change noting the anticipated cost savings that may encourage pilots to stay current, the ability for ATDs to enhance skills and improve proficiency, and the simplified rule language that will facilitate compliance.

The Aircraft Owners and Pilots Association (AOPA) and an individual commented that ATDs are much more advanced than they were at the time of the 2009 final rule, and that with these advances, it makes sense to allow the use of ATDs to meet instrument recency requirements in the same manner as with FFSs, FTDs, or aircraft.

As discussed in the NPRM, the FAA believes that the current design and technology of ATDs has advanced and provides a greater opportunity for the advancement of instrument skills and improved proficiency, as well as a wider range of experiences and scenarios, which justifies their increased use in § 61.57(c)(2). This is also reflected in the final rule, ''Aviation Training Device Credit for Pilot Certification,'' published on April 12, 2016,[26] which increased the ATD credit allowances for instrument rating certification requirements.

AOPA, General Aviation Manufacturers Association (GAMA), Society of Aviation and Flight Educators (SAFE), and one individual asked the FAA to revise the proposed rule language to expressly allow a pilot to meet the requirements for instrument recency experience in any combination of aircraft, FFS, FTD, or ATD.

While the FAA stated in the NPRM that a pilot would be permitted to complete instrument recency experience in any combination of aircraft, FFS, FTD, or ATD, the proposed rule would not have expressly allowed this. The FAA is therefore adding language to proposed § 61.57(c)(2) to expressly state that a person may complete the instrument recency experience in any combination of aircraft, FFS, FTD, or ATD. Furthermore, consistent with the changes made in § 61.51(g)(5), the FAA is removing the word ''approved'' from proposed § 61.57(c)(1) because an FFS or FTD used to satisfy § 61.57(c)(1) is qualified, not approved, by the National Simulator Program under part 60.

Two individuals opposed the provision. One individual believed that experience in an ATD cannot replicate that of an actual aircraft because piloting an aircraft involves many unexpected elements and stresses not present in an ATD. The other individual asserted that the instrument recency requirements are bare minimums and do not demonstrate proficiency, and that requiring more flight time would result in fewer accidents.

The FAA disagrees with requiring a pilot to accomplish the instrument recency experience in an aircraft. The FAA has allowed the instrument recency tasks to be accomplished in an FFS, FTD, or ATD since 2009.[27] The FAA did not propose to change the allowance of an ATD to satisfy instrument recency experience. Rather, given the technological advancements that have occurred in ATDs since 2009, the FAA proposed to align ATD use to the 6-month task completion interval and the required tasks consistent with FSTDs and aircraft. As previously explained in section III.A.2. of the preamble, ATDs are specifically designed to allow a person to replicate and execute instrument tasks just as they would in an aircraft. Therefore, the FAA finds that an ATD adequately replicates an aircraft for purposes of maintaining instrument recency. Section 61.57(c) does not require a pilot to experience variables and additional stressors that one may experience in an aircraft to maintain instrument recency. The FAA recognizes the importance of familiarity with these conditions and events; however, they are more attributable to training. An instrument-rated pilot maintaining instrument recency under § 61.57(c) has already accomplished the required instrument training and has already demonstrated his or her proficiency during a practical test with an examiner.

Furthermore, the FAA disagrees with the comment that requiring more flight time in an aircraft will result in fewer accidents. The FAA finds that allowing a pilot to accomplish instrument recency requirements in an ATD or FSTD encourages more pilots to remain instrument current and provides the necessary experience to enable safe operation of an aircraft in instrument meteorological conditions (IMC). As the FAA explained in the final rule, ''Aviation Training Device Credit for Pilot Certification,'' [28] the FAA believes that training in FSTDs and ATDs in combination with training in an aircraft reinforces the necessary pilot skill to rely solely on the flight instruments to successfully operate an aircraft in IMC. This mitigates any reliance on postural senses, sounds, or feelings that can otherwise lead to loss of control. The FAA further described that training devices do not require motion to be approved and that training devices cannot completely train the pilot to ignore certain erroneous sensory perceptions, but pilots develop this skill during the flight portion of their instrument training. Consistent with the final rule, ''Aviation Training Device Credit for Pilot Certification,'' [29] the FAA believes that instrument experience accomplished in ATDs is an effective procedural review and reinforces the necessary skills to properly interpret the aircraft's flight instruments, allowing successful operation of an aircraft in IMC.

The Lancair Owners and Builders Organization (LOBO) asserted that the FAA did not make a safety case to reduce the recency requirements. LOBO believed that the NPRM did not explain how this proposed provision would improve safety, and that to do so, the FAA needs more information, which was not presented. LOBO claimed the FAA should gather data regarding the following: How many instrument pilots are instrument current; how many pilots use an instrument proficiency check to maintain recency; how many pilots use an FFS, FTD, or ATD to maintain instrument recency; how many of those

[24] Prior to this final rule, § 61.57(c)(3) required persons using an ATD to establish instrument experience to complete the required tasks within the preceding 2 calendar months. Persons using an aircraft, FFS, FTD, or a combination, however, were required to establish instrument experience within the preceding 6 calendar months. 14 CFR 61.57(c)(1) and (2).

[25] Prior to this final rule, for persons using an ATD for maintaining instrument experience, § 61.57(c)(3) required an additional 3 hours of instrument experience and two unusual attitude recoveries while in a descending, Vne airspeed condition and two unusual attitude recoveries while in an ascending, stall speed condition.

[26] Final Rule, ''Aviation Training Device Credit for Pilot Certification,'' 81 FR 21449 (Apr. 12, 2016).

[27] Final Rule, ''Pilot, Flight Instructor, and Pilot School Certification,'' 74 FR 42500, 42516–42517 (Aug. 21, 2009) (amending § 61.57(c) to allow the use of aviation training devices, flight simulators, and flight training devices for maintaining instrument recent flight experience).

[28] 81 FR at 21456 (Apr. 12, 2016).

[29] *Id.*

pilots that use an FFS, FTD, or ATD to maintain instrument recency have been involved in an aircraft accident while flying under instrument flight rules; and how many more instrument rated pilots would maintain proficiency if the proposal were implemented. LOBO pointed out that AOPA polling indicates the average general aviation pilot is flying less than 100 hours per year. LOBO indicated that its own data indicates their average member is flying approximately 50 hours per year in a Lancair. Given these statistics, LOBO questioned whether instrument proficiency is possible for pilots who fly so few hours annually. LOBO also questioned whether reducing recency requirements for low activity instrument pilots would affect accident rates. Based on all of these comments, LOBO recommended the FAA research general aviation pilot training and experience, including instrument recency training methods, to better understand the impact on general aviation safety—positive or negative—of the NPRM.

The FAA is aligning the requirements for accomplishing instrument experience in an ATD with the requirements for accomplishing instrument experience in an FSTD or aircraft. Prior to this final rule, a person accomplishing instrument recency experience in an aircraft, FFS, FTD, or a combination, was required to, within the preceding 6 months, have performed: (1) Six instrument approaches; (2) holding procedures and tasks; and (3) intercepting and tracking courses through the use of navigational electronic systems. Persons accomplishing instrument recency experience exclusively in an ATD, however, were required to have performed, within the preceding 2 months, the same tasks and maneuvers listed above plus ''two unusual attitude recoveries while in a descending V_{ne} airspeed condition and two unusual attitude recoveries while in an ascending, stall speed condition'' and a minimum of three hours of instrument recency experience. This final rule amends § 61.57(c) to allow pilots to accomplish instrument experience in ATDs by performing the same tasks required for FSTDs and aircraft, and at the same 6-month interval allowed for FSTDs and aircraft.

While the data sought by LOBO would be useful, it does not currently exist.[30] However, based on the12 years of experience the FAA now has evaluating and approving ATDs and the significant advancements in ATD technology, the FAA has no reason to believe the rule change would result in a decrease in safety. As explained in the NPRM, the FAA imposed more stringent instrument experience requirements on pilots satisfying instrument recency in ATDs because, in 2009, ATDs represented new technology. The FAA finds that significant improvements in current ATD technology have made it possible to allow pilots to use ATDs for instrument recency experience at the same frequency and task level as FSTDs. The FAA believes this rule change is further supported by the recent ATD rule published on April 12, 2016, which recognized ATD capabilities and increased the ATD credit allowances for instrument rating certification requirements. Furthermore, in 2014, the FAA revised AC 61–136A, ''FAA Approval of Aviation Training Devices and Their Use for Training and Experience'' to include stricter approval criteria for ATDs. The FAA also revised FAA Order 8900.1 Volume 11, Chapter 10 ''AVIATION TRAINING DEVICE'', Section 1 ''Approval, Oversight, and Authorized Use Under 14 CFR parts 61 and 141,'' to improve FAA surveillance and oversight for the use of ATDs and to otherwise ensure their proper use. The stricter approval criteria and increased FAA oversight for ATDs ensures they are qualified and capable for pilots to successfully accomplish the instrument tasks described in § 61.57(c)(1).

In response to LOBO's concerns about the proficiency of low activity instrument pilots, as previously stated, instrument-rated pilots have already demonstrated proficiency during their practical test. Instrument proficiency is considered ongoing unless one fails to maintain instrument recency in the previous 12 calendar months. In that scenario, one would be required to complete an instrument proficiency check (IPC) in accordance with § 61.57(d) to exercise instrument rating privileges. While instrument-rated pilots may have a low number of annual flight hours, so long as they are complying with the instrument experience and instrument proficiency check requirements, they may exercise their instrument rating privileges. The FAA did not propose to change these requirements; any change to these requirements in this final rule would be out of scope.

Lastly, the FAA does not find that aligning the instrument experience requirements in an ATD with the instrument experience requirements in an FSTD or aircraft will result in an increased accident rate. Rather, this ATD allowance should lower the accident rate by allowing pilots to regularly practice instrument tasks and maneuvers in a hazard free environment. The FAA believes that new § 61.57(c)(2) will increase the opportunities for pilots to maintain recency, reduce cost, and generally promote maintaining instrument recency.

The Regional Air Cargo Carriers Association (RACCA) provided several recommendations concerning FTDs, including expanding the allowable instrument recency experience, training, and limited checking elements from FFS to include Level 3 and 4 FTDs; allowing credit for circling approaches in Level 3 and 4 FTDs with sophisticated, wide-angle visual systems but no motion system; and expanding the allowable credit in FFSs with the motion system turned off. RACCA further recommended reviewing current FAA FTD and simulator approval protocols to make them simpler and less labor-intensive for the FAA, operators, and contract training providers.

The FAA is not adopting RACCA's recommendations because they are outside the scope of this rulemaking.

As discussed above, the FAA is adding language to the proposed provision to make clear that a person may complete the instrument experience in any combination of an aircraft, FFS, FTD, or ATD. Other than this additional language, § 61.57(c)(2) remains unchanged from the NPRM.

B. Second in Command Time in Part 135 Operations

In the NPRM, the FAA proposed to amend § 135.99 by adding paragraph (c) to allow a certificate holder to receive approval of a second in command (SIC) professional development program (SIC PDP) via operations specifications (Ops Specs) to allow the certificate holder's pilots to log SIC time in operations conducted under part 135 in an airplane or operation that does not otherwise require a SIC.[31] As explained in the NPRM, the FAA believes that a comprehensive SIC PDP will provide

[30] The FAA referenced two studies in the final rule titled ''Aviation Training Device Credit for Pilot Certification,'' which was published on April 12, 2016, that supported the use of simulation for flight training. 81 FR 21449. *See* Kearns, Suzanne ''The Effectiveness of Guided Mental Practice in a Computer-Based Single Pilot Resource Management (SRM) Training,'' Ph.D. Dissertation (Capella University 2007); Carretta, Thomas R., and Dunlap, Ronald D., ''Transfer of Training Effectiveness in Flight Simulation: 1986–1997,'' United States Air Force Research Laboratory (1998).

[31] Prior to this final rule, a person serving as SIC in a part 135 operation could log SIC time only if more than one pilot was required under the type certification of the aircraft or the regulations under which the flight was being conducted. 14 CFR 61.51(f)(2).

opportunities for beneficial flight experience that may not otherwise exist and also provide increased safety in operations for those flights conducted in a multicrew environment. The FAA proposed requirements in § 135.99(c) for certificate holders, airplanes, and flightcrew members during operations conducted under an approved SIC PDP.

The FAA also proposed changes to certain logging requirements to enable the logging of SIC time obtained under a SIC PDP. The FAA proposed to revise § 61.159(c)(1) to contain the requirements for logging SIC pilot time in an operation conducted under part 135 that does not require an SIC by type certification of the aircraft or the regulations under which the flight is being conducted. The FAA proposed to revise the aeronautical experience requirements of §§ 61.159 and 61.161 to allow a pilot to credit SIC time logged under an SIC PDP towards the total time as a pilot requirements. The FAA also proposed to revise the definition of pilot time in § 61.1, the prerequisites for practical test in § 61.39(a)(3), and the logging requirements of § 61.51(f) to reflect the allowance for SICs to log flight time in part 135 operations when not serving as required flightcrew members under the type certificate or the regulations.

Airlines for America (A4A) and two individuals supported the proposed SIC PDP without change. They noted the benefits of mentoring, crew resource management training, and the overall experience gained by accumulating more flight time in a complex environment.

Several commenters suggested changes to proposed §§ 135.99, 61.159 and 61.51, which are discussed below.

1. Airplane Requirements

In the NPRM, proposed § 135.99(c)(2) would have required the aircraft operated under an approved SIC PDP to be a multiengine airplane.

The Aircraft Owners and Pilots Association (AOPA), Baron Aviation Services, National Air Transportation Association (NATA), Regional Air Cargo Carriers Association (RACCA), Tradewind Aviation, and two individuals commented that single-engine turbine-powered airplanes should be included for use in an SIC PDP. These commenters asserted that single-engine turbine-powered airplanes are equal to or more complex than certain multiengine airplanes. These commenters indicated that high performance single engine turbo-propeller airplanes such as the Pilates PC–12, Socata TBM 700, and Cessna Caravan can provide more beneficial flight experience and training for an SIC than other general aviation operations. RACCA, Tradewind Aviation, and one individual explained that these types of airplanes can provide applicable experience using ''glass cockpit'' and flight management systems in real-world IFR, weather, cross-country, and night flight in an airline-like environment.

Further, AOPA, RACCA, and one individual stated the SIC PDP would provide opportunities for pilots to gain flight hours. As proposed, these flight hours could be used toward an airline transport pilot (ATP) certificate. Increasing the types of aircraft permitted to be used for an SIC PDP would provide even more opportunities for this professional growth.

In light of these comments, the FAA is revising proposed § 135.99(c)(2) to allow multiengine airplanes or single-engine turbine-powered airplanes to be used in an approved SIC PDP. In Public Law 111–216, Congress directed the FAA to ensure applicants for an ATP certificate have received flight training, academic training, or operational experience that will prepare the pilot to, among other things, function effectively in a multi-pilot environment, in adverse weather conditions, and during high altitude operations, and to adhere to the highest professional standards. The FAA finds that pilots can obtain the operational experience described in section 217 of Public Law 111–216 using either a multiengine airplane or a single-engine turbine-powered airplane under an approved SIC PDP. The FAA is revising proposed § 135.99(c)(2) accordingly.

The FAA is adopting the proposed requirement for the airplane to have an independent set of controls for the second pilot flightcrew member, which may not include a throwover control wheel. The FAA also notes that the equipment and independent instrumentation requirements for the second pilot in § 135.99(c)(2)(i) through (viii) remain unchanged from the proposal.[32] [33]

[32] A cockpit voice recorder (CVR) is not required for operations conducted under an approved SIC PDP. In accordance with § 135.151, no person may operate a multiengine, turbine-powered airplane or rotorcraft having a passenger seating configuration of six or more and for which two pilots are required by certification or operating rules unless it is equipped with an approved CVR that meets certain requirements. However, the FAA notes that an operation under an approved SIC PDP is not considered an operation for which two pilots are required by operating rules.

[33] The FAA notes that the airplane is still required to comply with the equipment requirements of §§ 135.89 and 135.157, as applicable.

2. Part 135 Flight Instructors

In the NPRM, proposed § 135.99(c)(4) would have required the assigned PIC in an operation conducted under an approved SIC PDP to be an authorized part 135 flight instructor for the certificate holder.

Bemidji Aviation Services, NATA, and RACCA did not support proposed § 135.99(c)(4), asserting that there is no rationale to support the requirement for the PIC to be a qualified part 135 flight instructor. Bemidji noted that training PICs to be flight instructors would be time consuming and of little value because a new SIC under an SIC PDP will be in need of mentoring and real-world experience, rather than the type of training a part 135 flight instructor provides. Bemidji further contended that this requirement indicates that revenue flights are training flights rather than operations as a crew. However, Bemidji stated it would support certain crew pairing requirements. NATA believed that this requirement could limit operators from implementing a SIC PDP. RACCA stated that requiring the PIC to be a part 135 flight instructor is not necessary; however, initial operating experience (OE) under supervision by a flight instructor, additional line checks, or other intermittent quality assurance verifications are appropriate. RACCA stated that it appeared the FAA's intent was, from SIC initial qualification until the SIC was qualified to serve as PIC in part 135, an SIC logging flight time under an SIC PDP would be required to fly with a PIC who was a part 135 flight instructor. RACCA believed that the ''professional development'' element of the SIC PDP needs to be concentrated in the initial training, checking, and OE phases and that once the SIC has successfully completed that portion, he/she can continue to gain experience having completed that part of the program except for a possibility of more frequent quality assurance checks or proficiency checks in operators' programs than otherwise required for SICs in part 135. However, RACCA also stated the SIC flight time in revenue operations under the mentoring and supervision of an experienced part 135 PIC is more directly applicable to further career flying than hours in the following types of operations, which are currently acceptable: VFR flight instruction, pipeline patrol, banner towing, traffic watch flying, and light sport flying. RACCA further asserted that because the SIC PDP is restricted to less risky cargo operations, this requirement only increases complexity and cost without any risk mitigation

benefit.[34] One individual asserted that a low time pilot could benefit under the supervision of a seasoned PIC while receiving real-world experience in a crew environment.

Upon review of these comments submitted by Bemidji, NATA, RACCA, and individuals, the FAA has decided to withdraw the proposed requirement for assigned PICs in a SIC PDP to be qualified part 135 flight instructors. Under this proposed requirement, every operation conducted under an approved SIC PDP would have been required to have a qualified part 135 flight instructor assigned as the PIC. This proposed requirement was intended to create the appropriate training and mentoring environment to enable the proposed SIC PDP to support the Congressional directive and provide an effective method to acquire experience for ATP certification. In the NPRM, the FAA explained that the experience gained from working with and learning from a part 135 flight instructor in a crew configuration would have provided valuable experience. However, commenters suggested alternatives to the requirement for the PIC to be a part 135 flight instructor. Upon review of these suggestions, the FAA has determined that a combination of these alternatives will be an equally effective method to support the Congressional directive while ensuring these SICs are gaining valuable experience for ATP certification.

The FAA agrees with Bemidji, RACCA, and the individual commenter that a new SIC needs mentoring and real-world experience.[35] The FAA finds this objective could be accomplished by requiring the assigned PIC to have a certain amount of experience and mentoring training, rather than requiring him or her to meet the full training and qualification requirements for a part 135 flight instructor.

In new § 135.99(c)(4)(i) and (ii),[36] the FAA is including crew pairing requirements for flights conducted under an SIC PDP. Prior to assignment as a PIC in an operation conducted under an SIC PDP, the PIC must complete mentoring training and have minimum experience at that certificate holder. The mentoring training must include techniques for reinforcing the highest standards of technical performance, airmanship, and professionalism. Part 135 regulations require pilots to complete recurrent training to ensure that pilots remain competent in the performance of their assigned duties. The FAA has previously recognized that the necessary frequency for recurrent training is not the same for all subject areas. The FAA expects that PICs serving in an approved SIC PDP will use mentoring skills regularly and consequently these skills are less susceptible to degradation. Therefore, the FAA has determined that recurrent mentoring training must be completed at least every 36 calendar months. The FAA will include recommended topics for mentoring training in a new Advisory Circular (AC 135–43) on obtaining authorization of an SIC PDP.

As indicated by commenters, mentoring should be provided by an experienced PIC. For mentoring to be effective, the FAA believes that the mentor (*i.e.,* the PIC) must have a minimum level of experience and knowledge of the certificate holder's operations. Therefore, prior to assignment as a PIC in an operation conducted under an SIC PDP, the PIC must have been fully qualified to serve as a PIC for the certificate holder for at least the previous six calendar months. The FAA believes that in six months, the PIC would have conducted numerous flights with various environmental and operational factors which would have allowed the PIC to effectively consolidate his/her knowledge and skills of operations at that certificate holder. Certificate holders should encourage PICs serving in an operation conducted under an SIC PDP to provide observations and comments to be used in the data collection and analysis process.

As proposed in the NPRM, § 135.99(c)(1)(iii) requires the certificate holder with an approved SIC PDP to establish and maintain a data collection and analysis process that will enable the certificate holder and the FAA to determine whether the professional development program is accomplishing its objectives. Regarding RACCA's recommendations for initial OE, additional line checks, or other intermittent quality assurance verifications, the FAA agrees these types of events could be valuable components of an effective data collection and analysis process. In addition to the recommendations from RACCA, there may be other suitable methods to obtain relevant data for the data collection and analysis process. Therefore, the FAA will include RACCA's recommendations in the new Advisory Circular as possible data collection methods. The FAA notes that the data provided to the FAA by the certificate holder may be de-identified. The FAA further notes that records used for the data collection and analysis process will still be subject to record requirements, such as the Pilot Records Improvement Act of 1996 (PRIA).[37]

Lastly, contrary to RACCA's statement, the SIC PDP is not restricted to cargo-only operations. Except as provided in § 135.99(d), any part 135 operator meeting the requirements of § 135.99(c) may voluntarily choose to seek approval of an SIC PDP. Section 135.99(d) prohibits certificate holders who are authorized to operate as a basic operator, single PIC operator, or single pilot operator from obtaining approval to conduct an SIC PDP.[38] Section 135.99(d) remains unchanged from the proposal.

The requirements for certificate holders in §§ 135.99(c)(1)(i), (ii), and (iii) also remain unchanged from the proposal. However, because the FAA is withdrawing the proposed requirement for assigned PICs to be qualified part 135 flight instructors, the FAA is also withdrawing proposed § 135.99(c)(1)(iv), which would have required flight instructor standardization meetings.

The FAA further notes that the requirements for persons serving as SIC in § 135.99(c)(3)(i) through (iv) remain unchanged from the proposal.

3. Logging Requirements

In the NPRM, the FAA proposed to revise § 61.159(c) to set forth the requirements for logging SIC pilot time in a part 135 operation that does not require an SIC by type certification of the aircraft or the regulations under which the flight is being conducted. Proposed § 61.159(c) would have allowed a commercial pilot to log SIC pilot time toward the hours of total time as a pilot required by §§ 61.159(a) and 61.160, provided the SIC pilot time was obtained in part 135 operations conducted under a SIC PDP in accordance with § 135.99 and the PIC certified in the SIC's logbook that the

[34] RACCA's comments on this issue were submitted as to the regulatory evaluation. However, the FAA has included the comments here because they are related to the proposal and not specifically the cost/benefit analysis.

[35] Section 135.99(c)(3) contains the requirements for a pilot serving as SIC under an approved SIC PDP.

[36] Section 135.99(c)(4) contains the requirements for a pilot assigned to serve as PIC under an approved SIC PDP.

[37] 49 U.S.C. 44703(h).

[38] As further explained in the NPRM, these certificate holders—either by regulation or deviation—are not required to develop and maintain manuals that describe the procedures and policies to be used by the flight, ground and maintenance personnel. 14 CFR 135.21. Additionally, these certificate holders are not required to establish and maintain an approved pilot training program under § 135.341 or employ certain management personnel under § 119.69. Because of the limited size and scope of these certificate holders' operations, the FAA does not believe that they would provide the environment necessary to foster an SIC PDP.

SIC pilot time was accomplished under § 61.159(c). The FAA also proposed that the SIC pilot time obtained pursuant to § 61.159(c) may not be logged as PIC time even if the SIC were the sole manipulator of the controls and may not be used to meet the aeronautical experience requirements in § 61.159(a)(1) through (5) (*e.g.,* cross-country flight time, night flight time).

RACCA suggested the FAA allow a pilot to use the time logged under a SIC PDP toward the more specific flight time requirements for ATP certification set forth in § 61.159(a)(1) through (5), instead of only the 1,500 hours of total time as a pilot required by § 61.159(a). RACCA asserted that there is little quantifiable difference in the value of experience between aircraft that require a two pilot crew and aircraft authorized to utilize a two pilot crew in specific circumstances. RACCA further asserted that experience obtained by a properly trained and checked SIC is more directly applicable to IFR complex airplane operations and subsequent career flying than hours in the following types of operations, which are currently acceptable: VFR flight instruction, pipeline patrol, banner towing, traffic watch flying, and light sport flying.

In response to RACCA's comments, the FAA is revising proposed § 61.159(c) to allow pilots to credit time logged under a SIC PDP not only for total time as a pilot, but also toward the specific flight time requirements for ATP certification set forth in § 61.159(a)(1) through (4) (*e.g.,* cross-country flight time, night flight time, flight time in class of airplane, and instrument flight time). Under the proposal, the time logged under a SIC PDP would have counted toward the flight time requirements to serve as a PIC in part 135, which are located in § 135.243. Section 135.243 categorizes the flight time requirements the same as § 61.159(a). Because the SIC time logged under the SIC PDP may be used toward the total time, cross-country time, instrument time, and night time requirements of § 135.243, the FAA finds that it should also count toward the same categories of flight time under § 61.159(a). However, as explained below, the FAA maintains that the PIC flight time requirements in § 61.159(a)(5), including the PIC cross-country flight time and PIC night flight time, must be met as a required pilot flightcrew member.[39]

As proposed, the FAA maintains in the final rule that a SIC logging flight time under § 61.159(c) is not permitted to log this flight time as PIC time even when he or she is the sole manipulator of the controls. If the SIC time were to count toward the requirements of § 61.159(a)(5), a pilot could meet the ATP aeronautical experience requirements and transition to a part 121 SIC position directly from a SIC PDP, without serving as a part 135 PIC—which was not the FAA's intent. As explained in the NPRM, the FAA intended for § 61.159(c) to promote an environment in which a pilot's career follows a progression within part 135 that includes the pilot serving as a PIC in part 135 operations before transitioning to an SIC position in a part 121 operation. The FAA finds that allowing the SIC time to be used only toward the total time as a pilot requirements of § 61.159(a) and the specific flight time requirements of § 61.159(a)(1) through (4) is consistent with the proposal's objective. A pilot may use the time accrued under a SIC PDP to meet the time requirements of § 135.243 to serve as a PIC under part 135; then, as a required flightcrew member in part 135, that pilot may accrue the required PIC airplane time for an ATP certificate before transitioning to a part 121 operation.

Consistent with the changes to proposed § 61.159(c), the FAA is also revising proposed § 61.161(c) to allow pilots to credit time logged under a SIC PDP toward both the total time as a pilot required by § 61.161(a) and the specific flight time requirements for ATP certification set forth in § 61.161(a)(1), (2), and (4) (*e.g.,* cross-country flight time, night flight time, and instrument flight time), except for the specific flight time that must be obtained in a helicopter.

Upon further review, the FAA has decided to also allow SIC flight time to be logged during part 91 flight operations (*e.g.,* repositioning flights) conducted for the certificate holder when the operation is conducted in accordance with the certificate holder's operations specification for the SIC PDP. The FAA has determined that these part 91 flights share similar characteristics to the part 135 flights, such as multi-pilot environment, adverse weather conditions, and high altitude operations. The FAA has determined that if the certificate holder conducts these part 91 flights in a similar manner to its part 135 flights, these part 91 flights can provide beneficial flight experience for the SIC while also increasing safety in these part 91 flights. Furthermore, to log SIC flight time during a part 91 flight operation conducted for the certificate holder under an approved SIC PDP, the requirements of § 135.99(c) must be satisfied. Therefore, the aircraft is still required to have an independent set of controls for the SIC, which may not include a throwover control wheel, and the minimum necessary equipment and independent instrumentation for the second pilot.[40] These equipment and instrumentation requirements ensure that the SIC will be actively engaged as a pilot flying and pilot monitoring in both VFR and IFR conditions while conducting an operation under part 91 for the certificate holder. The flight time and duty period limitations and rest requirements in subpart F of part 135 will also still apply. Additionally, the pilot serving as PIC in a part 91 flight operation under an approved SIC PDP must be qualified and trained in accordance with § 135.99(c)(4). The FAA finds that a pilot may obtain the operational experience described in section 217 of Public Law 111–216 during part 91 flights conducted for a certificate holder when the operation is conducted in accordance with § 135.99(c) and the certificate holder's operations specification for the SIC PDP.

For the reasons discussed above, the FAA is revising the proposed amendments to §§ 61.159(c) and 135.99(c) to allow the logging of SIC flight time in operations conducted under parts 91 and 135,[41] provided the flight operation is conducted in accordance with the certificate holder's operations specification for the SIC PDP.[42] The FAA notes that to ensure the part 91 flights under an SIC PDP are conducted in a similar manner to part 135 flights, the operations specification for the SIC PDP will include specific requirements for these part 91 flights such as use of SOP, operational control, and recordkeeping.

RACCA and AOPA both recommended additional revisions to proposed § 61.159(c)(1). AOPA asserted that the FAA's proposed change to § 61.159(c)(1) eliminates the ability of a required SIC to use logged SIC flight

[39] As proposed, the FAA is revising § 61.159(a)(5) to clarify that to credit SIC time toward the 250 hours of PIC flight time required by paragraph (a)(5), the SIC must be a ''required'' flightcrew member performing the duties of PIC while under the supervision of a PIC. Under a SIC PDP, the SIC is not a required flightcrew member.

[40] 14 CFR 135.99(c)(2).

[41] The FAA is also revising proposed § 61.51(e)(5) and (f)(3) and the definition of ''pilot time'' in § 61.1 to reflect this allowance.

[42] The FAA is adding new § 61.159(c)(2), which requires the flight operation to be conducted in accordance with the certificate holder's operations specification for the second-in-command professional development program. Consequently, proposed paragraph (c)(2) is now paragraph (c)(3), and proposed paragraph (c)(3) is now paragraph (c)(4).

time toward the total time requirement for an ATP certificate in § 61.159(a). RACCA recommended the FAA revise the former language of § 61.159(c)(1)(iii) to ensure a required SIC can log flight time toward the total time requirements for an ATP certificate in § 61.159(a).

Revisions to proposed § 61.159(c)(1) are not needed to allow a required SIC to log flight time toward the requirements for an ATP certificate in § 61.159(a). Section 61.51(a) establishes the requirement for persons to document and record training and aeronautical experience used to meet the requirements for a certificate or rating under part 61. Section 61.51(f)(2) allows a person to log SIC flight time when that person holds the appropriate category, class, and instrument rating and more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is being conducted. Further, § 61.1(b) defines pilot time as including time in which a person serves as a required flightcrew member. Collectively, these regulations allow flight time logged as a required SIC to be used toward the aeronautical experience requirements for an ATP certificate as delineated in § 61.159(a). Therefore, the FAA is not revising proposed § 61.159(c)(1), as recommended by commenters, because the former language in § 61.159(c)(1), which allowed a person to credit SIC flight time toward the total time requirements in § 61.159(a), was redundant and unnecessary.

The FAA notes that proposed § 61.159(c) would have contained logging requirements for both SICs and flight engineers, similar to former § 61.159(c). Upon further reflection, the FAA has decided to restructure § 61.159(c), (d) and (e) for clarity. The FAA is relocating the flight engineer logging requirements, which were formerly in § 61.159(c)(2) and (3), to § 61.159(d). Thus, § 61.159(c) will contain only the SIC logging requirements under the SIC PDP. The FAA is redesignating former § 61.159(d) as § 61.159(e) and former § 61.159(e) as new § 61.159(f).

In addition to proposed § 61.159(c), the FAA proposed to revise the definition of ''pilot time'' in § 61.1 and the logging requirements in § 61.51(f) to reflect the allowances for SICs to log flight time in part 135 operations when not serving as required flightcrew members under the type certificate or regulations. The FAA also proposed to revise § 61.39(a)(3) to require a pilot who has logged flight time under the SIC PDP to present a copy of the records required by § 135.63(a)(4)(vi) and (x) at the time of application for the practical test. Due to the reorganization of proposed § 61.159(c), the FAA is referencing § 61.159(c), instead of § 61.159(c)(1), in the definition of ''pilot time,'' and in §§ 61.51(f)(3) and 61.39(a)(3). Other than updating the cross-reference to § 61.159(c), the definition of ''pilot time'' and the revisions to §§ 61.51(f) and 61.39(a)(3) remain unchanged from the proposal.

The FAA also proposed to revise the logging requirements of § 61.51(e) to allow the part 135 flight instructor serving as PIC in an operation conducted under an approved SIC PDP to log all of the flight time as PIC flight time even when the PIC is not the sole manipulator of the controls. As previously explained, the FAA is withdrawing the proposed requirement that the assigned PIC be a part 135 flight instructor. The FAA is therefore revising proposed § 61.51(e) to reflect the requirements the FAA adopted in § 135.99(c). Accordingly, § 61.51(e)(5) now allows a commercial pilot or airline transport pilot to log all flight time while acting as an assigned PIC of an operation conducted in accordance with an approved SIC PDP that meets the requirements of § 135.99(c).

4. Miscellaneous Comments on the SIC PDP

RACCA noted that the regulatory evaluation accompanying the NPRM stated ''This proposal would provide an additional option for commercial pilots seeking to meet the minimum aeronautical experience requirements for the ATP certificate while also providing a strong foundational experience for a developing professional pilot. For a commercial pilot to utilize this option, an operator would have to meet the additional requirements proposed in the NPRM. Any operators, who chose to do so, would expect their benefits to exceed their costs.'' RACCA believed this statement implies an additional, optional training requirement for the SIC to count flight time under the SIC PDP toward the ATP experience requirements. RACCA noted that there is no requirement for an ATP certificate in part 135 cargo-only operations and therefore additional training for an ATP certificate imposes an economic burden by requiring training not applicable to the operation for which the SIC is being qualified.

Neither the NPRM, nor the regulatory evaluation, proposed to require ATP training for an SIC to be able to log flight time under an SIC PDP. The statement in the regulatory evaluation was referencing the proposed new option for commercial pilots to log flight time under an SIC PDP to meet the minimum experience requirements for the ATP certificate. The proposed requirements for the SIC PDP did not include ATP training. A certificate holder is not required to have an SIC PDP. The FAA emphasizes that an SIC PDP is voluntary and would impose no new requirements on certificate holders conducting operations under part 135 if they choose not to seek approval of an SIC PDP. Any certificate holders who choose to have an SIC PDP would expect the benefits of the SIC PDP to exceed their costs of the SIC PDP.

One individual opposed the proposed SIC PDP, indicating the proposal was a money-making scheme that does not consider the negative consequences. This individual cited previous negative experience with non-required pilots in the right seat of the aircraft stating these unqualified non-essential pilots caused distractions for the PIC. Additionally, this commenter did not agree that a non-required SIC should be able to log flight time equal to the PIC unless the type certification requires an SIC.

Without additional information, the FAA cannot address the specific circumstances presented by the individual commenter. However, the SIC PDP requires pilots assigned as a non-required SIC to meet the same training and qualification requirements as a required SIC. More specifically, § 135.99(c)(3) requires the assigned SIC to meet the SIC qualifications in § 135.245, the flight time and duty period limitations and rest requirements in subpart F of part 135, and the crewmember testing and training requirements for SIC in subparts G and H of part 135.[43] The FAA notes that these requirements remain unchanged from the proposal. The FAA concludes that any concerns about unqualified pilots have been alleviated. Additionally, the FAA notes that although these non-required SICs will be able to log SIC flight time under an SIC PDP, there are restrictions. As described in the section on logging flight time, even if the SIC is the sole manipulator of the controls, the SIC cannot log PIC time. Additionally, pilots who use time logged under an SIC PDP to meet the aeronautical experience requirements for an ATP certificate will have a limitation on their certificate indicating that the pilot does not meet the PIC aeronautical experience requirements of the International Civil Aviation Organization (ICAO).

[43] The assigned SIC is also required to meet the hazardous material training requirements in subpart K, if applicable.

5. Effective Date and Implementation

In the NPRM, the FAA proposed that the amendments to §§ 61.39, 61.51(e) and (f), 61.159(a) and (c), 61.161, and 135.99(c) regarding logging flight time as a second in command in part 135 operations would be made effective 180 days after publication of any final rule associated with the NPRM. In the NPRM, the FAA acknowledged that these provisions affect part 119 certificate holders conducting operations under part 135 and will take more coordination and review by both certificate holders and the FAA.

The FAA recognizes, however, that the coordination and review timeframe will vary among certificate holders. Certain certificate holders' manuals and training programs may already include some of the components of an SIC PDP, such as SOP for conducting operations with a two pilot flightcrew, approved SIC training curriculums, and approved CRM training for operations with a two pilot flightcrew. In these instances, the FAA anticipates the development of the remaining components of an SIC PDP to take less time than for certificate holders who must develop all components of an SIC PDP.

Therefore, in the final rule, the amendments to §§ 61.39, 61.51(e) and (f), 61.159(a) and (c), 61.161, and 135.99(c) will be effective 150 days after publication of this final rule. This change in effective date will allow certificate holders and pilots to benefit from these provisions sooner than proposed, provided the certificate holder has developed all components of an SIC PDP and the certificate holder's principal operations inspector (POI) has authorized use of the SIC PDP in the certificate holder's operations specifications. The FAA notes that review and acceptance or approval of the various components of an SIC PDP by the certificate holder's POI is still required prior to authorization in the operations specifications. As such, certificate holders should plan accordingly to allow sufficient time for FAA acceptance or approval.

As previously discussed, § 135.99 allows a certificate holder to obtain authorization of an SIC PDP, which will be granted via a new operations specification (A062). To be eligible for approval of a SIC PDP, a certificate holder must be authorized to conduct IFR operations with a multiengine airplane or a single-engine turbine-powered airplane, that meets the aircraft, equipment, and instrumentation requirements of § 135.99(c)(2). In accordance with §§ 135.323 and 135.325, the certificate holder must submit a revised training program to the POI for approval. The revised training and qualification program must include (1) curricula for SICs that will serve in an SIC PDP, (2) curricula for PICs that will serve in an SIC PDP to include mentoring training and CRM training for two pilot flight crew operations, (3) curricula for flight instructors that will conduct the training of PICs and SICs in an SIC PDP, and (4) curricula for check pilots that will conduct the checking of PICs and SICs in an SIC PDP. In accordance with §§ 135.21 and 135.23, the certificate holder must also submit a revised manual to the POI for acceptance, which must include (1) standard operating procedures for operations with a two pilot flight crew, (2) duties and responsibilities of an SIC, and procedures to comply with the crew pairing requirements of § 135.99. The certificate holder must also submit procedures for the data collection and analysis process required by § 135.99(c)(1)(iii). The POI will review the documentation submitted by the certificate holder. Once the documentation meets the requirements for approval or acceptance, as applicable, the POI may authorize the SIC PDP via a new operations specification. The FAA will be issuing a new Advisory Circular to provide more detailed guidance to certificate holders on obtaining authorization of an SIC PDP.

C. Instrument Recency Experience for SICs Serving in Part 135 Operations

Prior to this final rule, § 135.245(a) required a person serving as second-in-command (SIC) in a part 135 operation conducted under IFR to ''meet the recent instrument experience requirements of part 61.'' The FAA proposed to remove the reference to part 61 in § 135.245(a) and move the current instrument experience requirements in § 61.57(c)(1) and (2) to new § 135.245(c). As explained in the NPRM,[44] it is more appropriate for the express requirement for instrument recency experience to be listed in part 135 rather than by reference to another rule part.

The FAA received comments from two organizations regarding this provision. The Aircraft Owners and Pilots Association (AOPA) and General Aviation Manufacturers Association (GAMA) recommended the FAA revise proposed § 135.245(c) to allow a pilot serving as SIC in a part 135 operation to use a combination of aircraft and FSTD to meet the proposed instrument recency requirements.

The FAA did not intend to foreclose the option of using a combination of aircraft and FSTD to accomplish SIC instrument recent experience requirements. The FAA is adding language to proposed § 135.245(c)(2) to clarify that a combination of aircraft and FSTD may be used.

AOPA also recommended that the FAA withdraw proposed § 135.245(c) and retain the current § 135.245(a) language to enable persons serving as SIC in a part 135 operation under IFR to use ATDs for instrument recency. Because § 61.57(c)(3) and (4) allow the use of ATDs to satisfy instrument recency requirements in part 61, AOPA believed the requirements of current § 135.245(a) may be satisfied by the use of ATDs. AOPA also believed that, rather than eliminating the use of ATDs for SICs serving in part 135, the FAA should add a limitation to specific Letters of Authorization (LOA) if the use of a particular ATD is not appropriate.

As noted in the NPRM, the FAA does not permit the use of ATDs to satisfy flight training, checking, and recency requirements in part 135. In accordance with § 61.4, the Administrator may approve an ATD for specific purposes. The FAA has never issued a LOA authorizing an ATD to be used to meet the qualification requirement of § 135.245.[45] The FAA acknowledges the confusion created by referencing part 61 in § 135.245(a).[46] The reference to ''recent instrument experience requirements of part 61'' in § 135.245 refers to § 61.57(c)(1) and (2) and (d). Therefore, the FAA is clarifying the SIC qualification requirements by including the express requirements of § 61.57(c)(1) and (2) and (d) in § 135.245(c) and (d) and by eliminating the reference to part 61.

AOPA also recommended that the FAA withdraw the proposal in § 135.245(c)(2) for an instructor to be present when a part 135 SIC conducts instrument recency in a FSTD. AOPA noted that, when the FAA modified the instrument recency requirements for part 61 in 2009, the FAA indicated that it did not want to require an instructor to be present when using an approved

[44] NPRM, ''Regulatory Relief: Aviation Training Devices; Pilot Certification, Training, and Pilot Schools; and Other Provisions,'' 81 FR at 29725.

[45] Advisory Circular AC 61–136A, FAA Approval of Aviation Training Devices and Their Use for Training and Experience, explains that the FAA will issue an LOA which will specify the part 61 or part 141 provision(s) for which the specific ATD is approved for use. Further, the AC states that pilots may use ATDs in accordance with the LOA to meet the aeronautical experience requirements of part 61.

[46] *See* Legal Interpretation to Mr. Gerald Naekel from Mr. Donald P. Byrne, Assistant Chief Counsel (June 18, 1991).

training device, but the change was not reflected in the regulatory language.[47] If the FAA's intent had been implemented, AOPA asserted, an instructor would not currently need to be present for a SIC in a part 135 operation to maintain instrument recency in a FSTD. AOPA stated that the FAA has failed to explain why an instructor must be present for SICs in a part 135 operation, but not for all other pilots maintaining compliance with part 61.

The SIC instrument experience requirements were added to part 135 on October 10, 1978, when the FAA published the ''Regulatory Review Program: Air Taxi Operators and Commercial Operations'' final rule, which substantially revised the requirements for operations under part 135.[48] In the final rule, the FAA stated that the primary objective was to upgrade the level of safety by providing passengers traveling on a flight conducted under part 135 with a level of safety comparable to part 121, considering the differences between the operations. Further, the FAA stated that the final rule upgraded training, testing, and proficiency requirements to ensure that passengers on aircraft operated under part 135 are flown by well qualified crewmembers. Specifically, the FAA stated that, ''[s]ection 135.245 not only contributes to raising the level of safety in part 135, but also enhances crewmember qualifications.'' [49] The FAA's position has not changed; operations under part 135 require a higher level of safety than operations under part 91 including a higher level of crewmember qualifications than required under part 61. Consistent with the higher level of safety required for part 135 operations, the FAA is retaining the requirement for an instructor to observe the tasks and iterations conducted in an FSTD. The FAA notes that this requirement has been relocated to § 135.245(c)(2)(iii). However, the FAA is no longer using the term ''authorized instructor'' as proposed in the NPRM. The term ''authorized instructor'' is defined in § 61.1; it is not defined in part 135. Therefore, for consistency with part 135 requirements, the FAA is revising proposed § 135.245(c)(2)(iii) to clarify that the tasks and iterations must be observed by a flight instructor qualified under § 135.338 or a check pilot qualified under § 135.337.

Upon further consideration, the FAA has decided to also include the instrument proficiency check (IPC) requirements of § 61.57(d) in § 135.245. Because a person who fails to satisfy the instrument experience requirements of § 61.57(c) for more than six calendar months may reestablish instrument recency only by completing an IPC in accordance with § 61.57(d), the FAA finds that the reference to ''recent instrument experience requirements of part 61'' in § 135.245 referred to the instrument experience requirements of § 61.57(c)(1) and (2) and the IPC requirements of § 61.57(d). The FAA recognizes that proposed § 135.245 did not include the option to reestablish instrument recency through an IPC. However, the FAA did not intend to eliminate this option for SICs in part 135. The FAA intended only for proposed § 135.245 to list the express requirements for instrument recency rather than reference the requirements of another part. Because the express requirements for instrument recency includes the IPC requirements of § 61.57(d), the FAA is including the IPC requirements in new § 135.245(d). However, to avoid confusion with § 135.297, which contains separate and unique instrument proficiency check requirements for PICs, the FAA is not using the term ''instrument proficiency check'' in § 135.245(d). Instead, the FAA is using the term ''reestablish instrument recency'' for SICs.[50]

The FAA notes that § 135.245(a) and (c)(1) remain unchanged from the proposal.

D. Completion of Commercial Pilot Training and Testing in Technically Advanced Airplanes

Prior to this final rule, a pilot seeking a commercial pilot certificate with an airplane single-engine class rating was required to complete 10 hours of training in either a complex or turbine-powered airplane.[51] In the NPRM, the FAA proposed to add a definition of technically advanced airplane (TAA) to § 61.1 and amend the training requirements to allow a pilot seeking a commercial pilot certificate with an airplane single-engine class rating to complete the 10 hours of training in a TAA instead of a complex or turbine-powered airplane. In addition to these regulatory changes, the FAA proposed to revise the practical test standards for commercial pilot applicants and flight instructor applicants seeking an airplane category single engine class rating to allow the use of a TAA on the practical tests.

The FAA received 35 comments on these proposed changes. Twenty-seven commenters generally supported the proposal. LOBO and 6 individuals did not support the proposal. One individual commenter did not opine, but asked for clarification regarding the definition of TAA. The following sections respond to these comments.

1. Definition of Technically Advanced Airplane

The FAA proposed to define ''technically advanced airplane'' in § 61.1 based on the common and essential components of advanced avionics systems equipped in an airplane, including a primary flight display (PFD), a multifunction flight display (MFD) and an integrated two axis autopilot. The FAA proposed that a TAA must include a PFD that is an electronic display integrating all of the following flight instruments together: An airspeed indicator, turn coordinator, attitude indicator, heading indicator, altimeter, and vertical speed indicator. Additionally, the FAA proposed that an independent MFD must be installed that provides a GPS with moving map navigation system and an integrated two axis autopilot.[52] The proposed definition of TAA would have applied to permanently-installed equipment.

GAMA suggested the FAA work with industry in refining the definition of TAA to ensure that it is appropriately flexible to accommodate future technologies.

The FAA recognizes that the proposed definition would have been too prescriptive. As explained throughout this section, the FAA has revised the proposed language in response to industry's concerns to make it more flexible and accommodating of new technologies. Furthermore, the FAA recognizes that the definition of TAA would have inappropriately embedded requirements, which may have inhibited future technologies from falling under the definition of a TAA.[53] The FAA is

[47] Legal Interpretation to Mr. Terrence K. Keller, Jr. from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (Aug. 6, 2010).

[48] Final Rule, ''Regulatory Review Program: Air Taxi Operators and Commercial Operations,'' 43 FR 46742 (Oct. 10, 1978).

[49] 43 FR at 46773.

[50] Consistent with the technical amendment to § 61.57(d), which is explained in section III.L. of this preamble, the FAA is not using the term ''practical test standards'' in the regulatory text of § 135.245(d). Rather, for the reasons explained in section III.L., the FAA is codifying in § 135.245(d) the areas of operation required to reestablish instrument recency.

[51] 14 CFR 61.129(a)(3)(ii) and appendix D to part 141.

[52] The MFD may also include additional capabilities such as depicting weather, traffic, terrain, navigation aids and airport information, but these capabilities would not have been necessary to meet the proposed definition.

[53] If the FAA were to adopt requirements in the definition of TAA, the FAA would not be able to grant an exemption from those requirements in the

therefore revising the definition of TAA in § 61.1 to contain a more general description of a TAA. TAA is now defined as an airplane equipped with an electronically advanced avionics system. The FAA is relocating the requirements regarding what a TAA must contain to § 61.129 by adding new paragraph (j). The FAA is also adding language to § 61.129(j) to allow the FAA to authorize the use of an airplane that may not otherwise meet the requirements of a TAA. This additional language is intended to provide flexibility by allowing the FAA to accommodate future technologies that do not necessarily meet the confines of the regulatory requirements for a TAA in § 61.129(j).[54]

AOPA stated that the terms ''Primary Flight Display (PFD)'' and ''Multifunction Display (MFD),'' which are not defined anywhere, will cause confusion. AOPA further noted that the same argument applies to removing ''advanced'' from ''electronically advanced avionics system.'' The addition of ''advanced,'' without any clarification, will generate questions over whether a particular system qualifies as advanced or not. AOPA commented that if a particular airplane is equipped with the items in proposed paragraphs (i) and (ii), then the airplane should be considered equipped as a TAA with the appropriate electronic avionics system.

The FAA is retaining the terms ''Primary Flight Display,'' ''Multifunction Display,'' and ''advanced'' in the TAA requirements. The FAA disagrees that the terms PFD and MFD will cause confusion. These terms are currently used and described in several FAA publications that are recognized by the aviation industry, including the Airplane Flying Handbook (FAA–H–8083–3B), the Pilot's Handbook of Aeronautical Knowledge (FAA–H–8083–25), the Aviation Instructors Handbook (FAA–H–8083–9A), the Instrument Flying Handbook (FAA–H–8083–15B), and the FAA/Industry Training Standards (FITS). The Pilot's Handbook of Aeronautical Knowledge defines a PFD and MFD in the glossary. PFD is defined as ''a display that provides increased situational awareness to the pilot by replacing the traditional six instruments used for instrument flight with an easy-to-scan display that provides the horizon, airspeed, altitude, vertical speed, trend, trim, and rate of turn among other key relevant indications.'' MFD is defined as a ''small screen (CRT or LCD) in an aircraft that can be used to display information to the pilot in numerous configurable ways. Often an MFD will be used in concert with a primary flight display.''

The FAA believes the terms PFD and MFD add clarity to the TAA requirements by describing and prioritizing the display features and elements for TAA avionics and their respective functions. For example, the term PFD is specific to the use of the primary flight controls to maintain aircraft attitude and positive control. The PFD is used by the pilot to execute appropriate use of the control stick or yoke for pitch and bank, rudder pedals for yaw, and throttle for engine power. The PFD is designed specific to controlling the aircraft attitude and altitude relative to the horizon and the surface of the earth, especially when outside visibility is poor or unavailable. The MFD has a different priority; its function is secondary to the PFD. The MFD is designed for navigational use and position awareness information, even though it may include some PFD features for redundancy. Furthermore, the FAA is requiring certain minimum display elements for both a PFD and MFD, respectively, thereby clarifying what will be considered a PFD or MFD.

As for the term ''advanced,'' the FAA finds it necessary to describe the avionics system of a TAA as ''advanced'' to differentiate current new glass cockpit aircraft designs from older aircraft that used six independent mechanical dial/analog style flight instruments.

Twin City suggested the FAA clarify whether the MFD requirement may be satisfied by a split-screen display (*e.g.,* Dynon Skyview) or two independent screens (*e.g.,* Garmin G500) contained within a single physical unit. Twin City also asked whether the moving map display of common GPS/WAAS navigators (*e.g.,* Garmin GTN650/750, Avidyne IFD 440/540) would meet the MFD requirement.

Section 61.129(j)(2) requires only the minimum elements of a MFD; it does not preclude the use of a split-screen display or two independent screens contained within a single physical unit. Therefore, a manufacturer may use a split-screen display or two independent screens for the PFD and MFD provided the displays contain the minimum elements required for each. Furthermore, in response to Twin City's comment, the FAA is clarifying the MFD requirements by first describing what the display shows (*i.e.,* a moving map) and then describing how the display is facilitated (*i.e.,* using GPS navigation). Accordingly, § 61.129(j)(2) now requires the MFD to include, at a minimum, a moving map using GPS navigation. The FAA believes this revision to the proposed language clarifies that a system with a moving map display common to GPS/WAAS navigators would satisfy the MFD requirement. Additionally, the FAA is requiring the aircraft position to be displayed on the moving map. The FAA finds this additional language adds clarity to the MFD requirement and ensures that existing equipment, such as the systems identified by Twin City, would satisfy the MFD requirement for a TAA.

Several commenters noted ambiguity with requiring the MFD to include an ''integrated two axis autopilot.'' Garmin noted that the G500 and G600 have autopilot mode control and annunciations capabilities for select autopilots on the PFD, not the MFD portion of the display. Therefore, the autopilot function itself is provided in a separate piece of equipment and not included in the MFD. Garmin also noted that equipment, such as Garmin's GTN650 and GTN750, could be considered an independent additional MFD that includes GPS with moving map navigation but the autopilot function and related mode control and annunciations are provided in separate pieces of equipment. Twin City suggested the FAA remove ''integrated'' from the description of the autopilot, allowing the use of independent/aftermarket autopilot systems.

In response to these comments, the FAA did not intend to exclude systems that provide autopilot functions separate from the MFD. The FAA is therefore separating the ''two-axis autopilot'' requirement from the MFD requirement. Accordingly, under new § 61.129(j)(3), the two axis autopilot is no longer required to be included as part of the MFD. This change from what was proposed allows the use of independent/aftermarket autopilot systems.

Twin City also asked the FAA to specify whether the integrated autopilot must include GPS roll steering (GPSS). Furthermore, Twin City asked whether the proposed two-axis requirement would have been satisfied by autopilots

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future because the FAA's regulations describe an exemption as a request for relief from the requirements of a regulation. 14 CFR 11.15.

[54] The FAA will revise Order 8900.1, Flight Standards Information Management System, Vol. 5, Chapter 1, Sec. 4, Considerations for the Practical Test, 5–85 AIRCRAFT AND EQUIPMENT USED DURING PRACTICAL TESTS to describe the process for obtaining an authorization that designates an aircraft as a TAA in accordance with § 61.129(j). The FAA will also revise AC 61–65 to provide guidance on how to submit a request to the Administrator to gain approval of an airplane as a TAA, if the airplane does not already meet the express requirements of § 61.129(j).

with altitude hold function only, or if vertical navigation (altitude preselect, glideslope tracking, etc.) is required.

In response to Twin City's comments, the TAA requirements of § 61.129(j) do not require the autopilot to have GPSS. However, § 61.129(j) specifies only the minimum requirements for a TAA. Therefore, an autopilot may have additional features, including GPSS. The ''two axis'' requirement refers to the lateral and longitudinal axes. The autopilot at a minimum must be able to track a predetermined GPS course or heading selection, and also be able to hold a selected altitude. The autopilot is not, however, required to control vertical navigation other than holding a selected altitude. The FAA is revising the proposed language for clarity and to accommodate future advancements in technology. Rather than requiring the MFD to have an integrated two axis autopilot, the FAA is requiring the TAA to have a two axis autopilot integrated with the navigation and heading guidance system. The FAA believes this revision from what was proposed clarifies the minimum requirements for the two axis autopilot and also allows for flexibility in autopilot design and installation.

AOPA, Garmin, and GAMA recommended that the FAA not require the MFD to be an ''independent additional'' piece of equipment because this requirement would preclude a single display that features the required information of both a PFD and a MFD from qualifying as a TAA.

The FAA agrees that the proposed definition of TAA would have been unintentionally restrictive and would have excluded some qualifying aircraft unnecessarily with its use of the phrase ''independent additional.'' The proposed requirement for an MFD to be an independent additional piece of equipment was intended to ensure that the minimum display elements are visible at all times. The FAA is not opposed to an aircraft having one display or piece of hardware that meets the overall definition requirements of § 61.129(j). The FAA is therefore removing the phrase ''independent additional'' from the proposed language to allow a single piece of equipment or single display to satisfy the requirement for both a PFD and MFD. However, to ensure that both displays are visible at the same time, the FAA is requiring the display elements for both the PFD and MFD (paragraphs (j)(1) and (2)) to be continuously visible.[55]

Garmin noted that the proposed phrase ''(MFD) that includes, at a minimum, a Global Positioning System (GPS) with moving map navigation and an integrated two axis autopilot'' is problematic. Garmin explained that the MFD portion of the G500 and G600 has a moving map that is driven by GPS but the GPS is a separate piece of equipment and not included in the MFD portion of the display.

In reference to the G500 and G600 equipment identified by Garmin, the FAA understands that the PFD and MFD can be driven or supported by other pieces of equipment to provide for its required functionality. Many of the display features for the PFD and MFD can be driven by separate pieces of equipment that are connected to the display. The TAA requirements in no way restrict the use of peripheral or supporting equipment that enables the display functionality described for the PFD and MFD in the TAA requirements. Therefore, the FAA finds that the G500 and G600 equipment identified by Garmin likely satisfies the requirements for an MFD.

Garmin also commented that the phrase ''Global Positioning System (GPS) with moving map navigation'' inappropriately mixes ''GPS'', ''moving map'', and ''navigation'' functionality. Garmin noted that FAA has separate TSOs for these functions, including for GPS sensors: TSO–C145 (GPS with SBAS), TSO–C161 (GPS with GBAS), and TSO–C196 (GPS only); for moving map: TSO–C165, and for navigation: TSO–C146 (standalone navigation equipment using GPS/SBAS sensor) and TSO–C115d (required navigation performance (RNP) equipment using multi-sensor inputs). Garmin added that it would be better to list these functions separately to allow for avionics architectures that provide these functions in different equipment that still supports the concept of a TAA.

In response to Garmin's concern with the use of the terms GPS, moving map, and navigation, the FAA is only describing the display functionality requirements of the PFD and MFD equipment. The FAA is not adopting any requirements for the underlying architecture or supporting equipment that would provide for the display functions or capabilities.[56] Therefore, while there may be different TSOs for the various functions of GPS, moving map, and navigation resulting in separate pieces of underlying equipment, this equipment can support the MFD requirements so long as the MFD includes a moving map that uses GPS navigation with the aircraft position displayed.

GAMA commented that the FAA should consider whether it is appropriate to evaluate designating certain rotorcraft as technically advanced for certain training and testing related initiatives in the future, noting several benefits.

The FAA appreciates GAMA's comments. However, the FAA finds it unnecessary to designate a rotorcraft as technically advanced at this time because there are no regulatory requirements to obtain training in a technically advanced rotorcraft.

2. Amendment to Aeronautical Experience Requirement for Commercial Pilots

The FAA proposed to amend § 61.129(a)(3)(ii) and appendix D to part 141 to allow a pilot seeking a commercial pilot certificate with an airplane category single engine class rating to complete the 10 hours of training in a complex airplane, turbine-powered airplane, or a TAA, or any combination of these three airplanes.[57]

AOPA, American Flyers, Bemidji, Eagle Flight Centre, UND, NATA, Twin City, and nine individuals, supported the proposal, noting that it would provide training alternatives to aging complex airplanes and reduce costs. Several commenters noted that allowing TAAs in place of complex airplanes would introduce commercial pilot candidates to risk management and increase pilot proficiency in systems management, integration, and use of glass cockpit instrumentation, which would result in a safer, more valuable training experience. Commenters explained the costs and maintenance issues associated with aging complex airplanes, and stated that allowing TAAs to be used as a replacement would address the lack of availability of complex airplanes. Furthermore, several commenters believed the proposal would enhance safety, while others commented that any potential risk to safety would be mitigated by the requirement in § 61.31(e) that a pilot receive training and an endorsement from an instructor prior to acting as PIC in a complex airplane.

As commenters noted, there are several benefits associated with allowing TAAs to be used in place of complex airplanes. For these reasons and for the reasons explained in the

[55] 14 CFR 61.129(j)(4)

[56] The FAA notes that any installed equipment must meet the appropriate regulatory requirements and standards.

[57] As previously stated, prior to this final rule, a pilot seeking a commercial pilot certificate with an airplane single-engine class rating was required to complete 10 hours of training in either a complex or turbine-powered airplane. 14 CFR 61.129(a)(3)(ii) and appendix D to part 141.

NPRM, the FAA is amending § 61.129(a)(3)(ii) and appendix D to part 141 to allow a pilot seeking a commercial pilot certificate with an airplane category single engine class rating to complete the 10 hours of training in a complex airplane, turbine-powered airplane, or a TAA.[58]

AOPA recommended the FAA revise the proposed rule language of § 61.129(a)(3)(ii) and appendix D of part 141 to clarify that the combined use of complex, turbine-powered, and technically advanced airplanes is permitted.

As evident from the NPRM, the FAA intended to allow a pilot seeking a commercial pilot certificate with a single engine class rating to complete the 10 hours of training in any combination of complex, turbine-powered, and technically advanced airplanes. However, the proposed rule language did not reflect this intent. The FAA is therefore adding language to § 61.129(a)(3)(ii) and appendix D to part 141 to clarify that any combination of a complex airplane, turbine-powered airplane, or TAA may be used. For consistency, the FAA is also adding language to § 61.129(b)(3)(ii) and appendix D to part 141 to clarify that a pilot seeking a commercial pilot certificate with a multiengine class rating may complete the 10 hours of training using any combination of multiengine complex airplanes or multiengine turbine-powered airplanes.

Furthermore, as explained in the NPRM, the FAA proposed to amend § 61.129(a)(3)(ii) and appendix D to part 141 to allow an applicant for a commercial pilot certificate with a single-engine class rating to complete 10 hours of training in a complex, turbine-powered or technically advanced airplane. The FAA explained how demonstration of proficiency in an airplane that is electronically complex will be comparable to the demonstration of proficiency in an airplane that is mechanically complex. Thus, based on the FAA's proposal, the option to use a TAA was intended to apply to all commercial pilot applicants for a single-engine class rating regardless of whether the applicant was seeking a land or sea rating. The FAA recognizes, however, that proposed § 61.129(a)(3)(ii) did not accurately reflect this intent as it applied to commercial pilot applicants for single-engine sea ratings. Rather, proposed § 61.129(a)(3)(ii) would have allowed a commercial pilot applicant for a single-engine sea rating to use only a complex airplane. Therefore, consistent with its intent, the FAA is revising proposed § 61.129(a)(3)(ii) to allow applicants for a commercial pilot certificate with a single-engine class rating (including both land and sea) to complete the 10 hours of training in a complex, turbine-powered, or technically advanced airplane, or any combination thereof. The FAA is specifying in § 61.129(a)(3)(ii), however, that the airplane must be appropriate to land or sea depending on the rating sought, which is consistent with the requirement in § 61.129(a)(3)(ii) as it existed prior to this final rule. The FAA is also adding language to appendix D to part 141 to clarify that the airplane used to satisfy the 10 hours of training in a complex, turbine-powered, or TAA must be appropriate to land or sea depending on the rating sought.[59]

Bemidji suggested the FAA add an exception to § 61.31(e), which prescribes additional training for operating complex airplanes, and § 61.31(f), which prescribes additional training for operating high-performance airplanes, to allow a part 135 flight instructor without a current flight instructor certificate/flight instructor instrument certificate to satisfy the training and endorsement requirements of paragraphs (e) and (f). Bemidji recommended an exception similar to § 61.31(g)(3)(iv), which excepts from the training and endorsements requirements of paragraphs (g)(1) and (2) persons who can document satisfactory completion of a PIC proficiency check under part 121, 125, or 135 conducted by the Administrator or by an approved pilot check airman. Bemidji noted that complex airplane training is becoming difficult for new pilots to receive in both part 61 and part 141 flight school environments and that an increasing number of part 135 instructors do not maintain a current flight instructor certificate because it is not required. Bemidji added that the current language in § 61.31(e) may become an issue in the typical flight training environment if the complex airplane is no longer needed for the commercial certificate, and if fixed gear multiengine aircraft become more popular in the flight training environment.

The FAA agrees with revising § 61.31(e) and (f) to allow a competency check under part 135 to meet the requirements for training in complex or high performance airplanes. However, the FAA is not providing an exception for part 121 or 125 operators. The change to the commercial pilot training requirements to allow use of a TAA instead of a complex airplane for the airplane single-engine class rating could require a part 135 air carrier or operator to provide this training to newly employed pilots who may not have previous experience in complex airplanes. The FAA understands Bemidji's comment to indicate that this change could also require a part 135 air carrier or operator to provide high-performance airplane training to newly employed pilots. The FAA infers this suggestion from Bemidji's comment because many complex airplanes are also high-performance airplanes. As a result, many pilots complete complex and high-performance training using the same airplane. Therefore, since a complex airplane is no longer required for the commercial certificate with an airplane single-engine class rating, it is more likely that a newly-employed pilot at a part 135 air carrier or operator might not have previous experience in a high-performance airplane.

In accordance with § 135.323, a part 135 air carrier or operator is currently required to establish and implement an approved training program that ensures that each pilot, flight instructor, and check pilot is adequately trained to perform his or her assigned duties. Therefore, a part 135 approved training program for an airplane that meets the definition of complex or high-performance will include the required ground and flight training necessary to meet the intent of § 61.31(e)(1)(i) and (f)(1)(i), as applicable. All part 135 pilots are required to complete a § 135.293 competency check every 12 calendar months. Therefore, the FAA agrees with Bemidji that it is appropriate to include an exception in § 61.31(e) and (f) for persons who have successfully completed a § 135.293 competency check in a complex or high performance airplane, or in an FSTD that is representative of a complex or

[58] General Aviation Airplane Shipment Report, End-of-Year 2006 (Washington, DC: General Aviation Manufacturers Association, 2007) indicates that 92 percent of the 2,540 piston airplanes delivered during 2006 were equipped with glass cockpit electronic flight displays. An Aircraft Owners and Pilots Association Air Safety Foundation Special Report titled ''Technically Advanced Aircraft—Safety and Training'' states ''virtually every newly designed transportation airplane is a TAA, including Lancair, Cirrus, Diamond, and the Adam 500 * * * Many owners are retrofitting their classic aircraft to convert them to TAA with IFR-certified GPS navigators and multifunction displays.''

[59] Under appendix D to part 141, each approved course must include flight training on the approved areas of operation listed in section 4, paragraph (d) that are appropriate to the aircraft category and class rating for which the course applies. For an airplane single-engine course, paragraph (d) requires training on airport and seaplane base operations. Therefore, the FAA finds that the ten hours of training in a complex, TAA, or turbine-powered airplane should be appropriate to land or sea depending on the rating sought.

high performance airplane.[60] The FAA is adding these exceptions to § 61.31(e)(2)(ii) and (f)(2)(ii).[61] The FAA notes that, in accordance with these exceptions, the competency check must be documented in the pilot's logbook or training record. Because part 125 operators are not required to have approved training programs, persons will not have received the required ground and flight training specific to the operation of complex and high performance airplanes in accordance with an approved training program prior to completing a part 125 competency check. Therefore, the FAA is not providing an exception for part 125 operators. Furthermore, the FAA finds it unnecessary to include a part 121 proficiency check as an exception to § 61.31(e) and (f). Section 121.159 prohibits certificate holders from operating a single-engine airplane under part 121. To obtain a commercial certificate with an airplane multiengine land class rating, § 61.129 requires a pilot to have received training in a multiengine complex airplane. Furthermore, § 121.436 requires pilots serving in part 121 operations to hold an ATP certificate and an appropriate type rating, and § 61.159(a)(3) requires an applicant for an ATP certificate with a multiengine rating to have 50 hours of flight time in a multiengine airplane (of which 25 hours may be completed in a FFS). As a result, the FAA expects that pilots will receive the training and endorsements required by § 61.31(e) and (f) prior to obtaining employment at a part 121 air carrier.

An individual, who identified himself as a pilot, suggested that to mitigate the risk of gear up landings for students that did not receive training in complex airplane it may be appropriate to amend the requirements of 14 CFR 61.31(e). This individual suggested requiring additional experience and/or training prior to receiving the complex endorsement, rather than keeping the requirement under § 61.129(a)(3)(ii) with respect to commercial pilot certification.

Similarly, SAFE and one individual recommended the FAA require a commercial pilot to have at least 10 hours of PIC time in a complex airplane prior to exercising commercial privileges in a complex airplane.

The FAA is not adding additional training or experience requirements to § 61.31(e). Adding the option to train in a TAA at the commercial pilot level does not change the FAA's safety assessment that a person who complies with § 61.31(e), which requires training and an endorsement from an authorized instructor certifying that the person is proficient to operate a complex airplane, is sufficient.

LOBO and four individuals, including one who identified himself as an instructor, opposed the provision, asserting that the proposed amendments would provide for a commercial pilot certificate without experience operating the controls of a mechanically complex airplane. LOBO stated that as proposed, training will result in a pilot who can operate TAA, but will know nothing about systems and procedures on complex airplanes such as controllable pitch propellers and retractable landing gear systems. LOBO further stated that many of these commercial pilots will go on to get flight instructor certificates and teach in single engine airplanes, again without having to demonstrate complex system operations. The individual, who identified himself as an instructor, stated that it is the degradation in physical pilot skills that has been noticed over time as having become problematic to the FAA and National Transportation Safety Board. This commenter noted the importance of demonstrated skill with learning, understanding and demonstrating a complicated aircraft system in the performance of flight duties. Another individual noted that the proposal would provide the pilot with no experience in the flight dynamics (changing pitch and drag) when operating landing gear, flaps and a controllable propeller.

LOBO and three individuals, one of whom identified himself as an instructor, noted that a combination of complex airplane and TAA for use during training and checking would be a better choice. Specifically, LOBO suggested that commercial pilot applicants should have to demonstrate proficiency with both glass cockpit technology and complex system operations, including use of the landing gear.

LOBO and three individuals generally noted that current requirements provide valuable experience in cockpit management procedures and complex systems operations, not provided by TAA. Specifically, LOBO noted that the perception that an FAA checkride in a single engine TAA will produce a commercial pilot with the same skills as one who had to learn complex airplane operations is false. One individual noted that training in a complex airplane provides the proper mindset and cockpit management procedures needed in order to be successful long term pilots. Additionally, one individual, identified as an instructor, noted that the original purpose of the regulation was to ensure pilot demonstration and mastery of both the technical aspects of the system operation and incorporating that understanding into the safe and efficient operation of the airplane. This individual further believed that the FAA has lost sight of that purpose in seeking to substitute a TAA in place of complex or turbine powered airplanes.

The FAA disagrees with comments suggesting that TAA skills are not as significant or as necessary as complex airplane skills. The FAA does not suggest that this is the same skill set required for operating a complex airplane, but an appropriate experience requirement for a commercial pilot applicant. This final rule allows the combined use of a turbine-powered, complex, or TAA for satisfying the experience requirements. In fact, most, if not all, production aircraft currently produced now have glass cockpits utilizing advanced LCD displays for aircraft control and navigation. These advanced flight information systems are becoming mainstream equipment in both general and commercial aviation aircraft operations, and many older aircraft are being retrofitted with this new instrument glass cockpit technology.

The FAA emphasizes that prior to acting as PIC of a complex airplane, a commercial pilot (or any other certificated pilot) must receive and log additional ground and flight training in a complex airplane and receive an endorsement from an authorized instructor certifying that the person is proficient to operate a complex airplane.[62] This final rule does not remove or amend that requirement in any way. The FAA does not dispute that proficiency in a complex airplane is a necessary skill for a commercial pilot who intends to operate as PIC in such airplanes. Authorized flight instructors who provide these complex airplane endorsements have a responsibility to

[60] In accordance with § 135.341, part 135 air carriers or operators with only one pilot employee are not required to have an approved training program. While these pilots are still required to have satisfactorily completed a § 135.293 competency check every 12 calendar months, the FAA finds that they may only be excepted under new § 61.31(e)(2)(ii) and (f)(2)(ii) if they have received ground and flight training under an approved training program.

[61] To add the exceptions to paragraphs (e)(2) and (f)(2), the FAA had to reorganize the paragraphs. Accordingly, the exceptions that were provided in former paragraphs (e)(2) and (f)(2) are now in paragraphs (e)(2)(i) and (f)(2)(i), respectively. The new exception for persons who have satisfactorily completed a competency check under § 135.293 are now in § 61.31(e)(2)(ii) and (f)(2)(ii).

[62] 14 CFR 61.31(e).

ensure the pilot is proficient and competent before providing the endorsement. Therefore, pilots will continue to be formally trained and required to demonstrate competency and proficiency in a complex airplane prior to receiving an endorsement authorizing a pilot to operate and act as PIC in a complex airplane.[63] The FAA further emphasizes that a fixed amount of time or experience in an aircraft does not guarantee pilot proficiency. Training time requirements leading to pilot proficiency can vary from one individual to another. A flight instructor is expected to provide a sufficient amount of training time as necessary to verify proficiency before providing a pilot operating privileges and endorsements.[64]

LOBO and two individuals believed that the proposal would increase the risk of gear up landings. LOBO asserted that the number one cause of all Lancair accidents and incidents is failure to follow proper procedures. An individual explained the need for pilots to be trained on operations of retractable landing gear and the associated emergency procedures. This individual emphasized that training in a TAA cannot serve as a substitute.

This final rule does not eliminate the requirement for a pilot to receive training in complex airplane operations prior to acting as PIC of a complex airplane. The amendment to § 61.129(a)(3)(ii) allows a pilot to use a TAA as an alternative to a complex airplane to satisfy the aeronautical experience specified in paragraph (a)(3)(ii). However, under § 61.31(e), a pilot is still required to receive training in a complex airplane and an endorsement from the authorized instructor certifying that the pilot is proficient to operate a complex airplane prior to acting as PIC of a complex airplane. An authorized instructor is responsible for providing as much training time as necessary to ensure a person is proficient before providing a complex airplane endorsement. Therefore, the FAA does not expect the final rule to result in an increase in gear up landings.

LOBO cited a report by Tom Turner of the American Bonanza Society that noted ''Tracking accident reports through other sources, I've found that nearly 20 percent of all accidents in piston-powered, retractable gear aeroplanes are gear-up landings. The U.S. Federal Aviation Administration (FAA) tells us there is an average of three gear-up landings every week in the United States.'' (Turner, 2015). LOBO stated that Turner also stated that landing gear related mishaps cost the insurance industry (and the owners who pay premiums) nearly $1 million per month in claims or $12 million per year, far more than the $1.6 million per year in savings proposed by the NPRM.[65]

The FAA reviewed the gear up landing statistics referenced by LOBO and has determined, with the assistance of the National Transportation Safety Board, that the gear up landing statistics are significantly less than described, representative of mostly private operators, and the majority of them not engaged in commercial operations. The NTSB reported to the FAA that between January 2013 and June 2016 there were a total of 59 gear-up incidents and accidents reported, and all but one was operating under part 91 operating rules.[66] Additionally, of the 59 reports, half were private pilots acting as PIC and 93% reported no injuries. This information suggests that the cost of such incidents or accidents is much lower and contradicts the LOBO's position and referenced data. This would also reduce the insurance costs estimates that LOBO references from Turner, and suggests that those costs are also significantly lower. LOBO failed to provide how this third party statistical data is captured, substantiated, or verified. In the NPRM, the FAA determined that the cost savings benefits allowing the use of TAA would be about $9.7 million or $8 million in present value at a 7 percent discount rate. This was based on half of all initial single engine commercial pilot applicants (based on the number of certificates issued in previous years) using a TAA aircraft for training and on the practical test. This also included cost savings associated with those who would train and use a TAA for the flight instructor airplane practical test.[67] The FAA believes this is a very conservative estimate and it is likely that more than half will take advantage of using a less expensive TAA airplane for the commercial pilot experience requirement.

LOBO disagreed with the FAA's position that there are certain challenges with availability, maintenance and cost of complex airplanes. Specifically, LOBO stated that the FAA's position that airplanes with retractable landing gear are unavailable for purchase, expensive to maintain, and are not equipped with glass cockpits, is false. LOBO noted that it is aware of at least one retractable gear airplane with a Garmin G500 cockpit and that there are single engine retractable gear airplanes suitable for flight training available at affordable prices, but did not provide any specific data. One individual acknowledged the higher maintenance costs for complex airplanes, but also noted the higher acquisition costs for TAAs. This individual explained that there is little cost difference to the student because the equally high maintenance and acquisition costs are passed on to the renter. Another individual believed that the initial acquisition costs for TAAs makes the cost of training in TAA far greater than in complex airplanes.

Based on public comment, the GAMA shipment database, and discussion with large general aviation organizations, the current fleet of available complex airplanes is decreasing. Many commenters describe limited or no availability of complex airplanes for rent. New production of these types of complex airplanes used for initial flight training is at an all-time low,[68] and maintenance costs for many of those older complex airplanes is steadily increasing. As noted previously, other commenters discussed the difficulty of obtaining parts and the associated cost. Additionally, the FAA never stated that complex airplanes do not have glass cockpits. The LOBO statement describing a new complex airplane with a G500 glass cockpit at an affordable cost is contradictory to the current understanding of the high cost for such complex airplanes. Also, the commenter's reference to higher acquisition costs for TAA fails to take into account that the acquisition cost for a retractable gear airplane of the same year of production as a TAA aircraft, is also equally expensive if not more so

[63] 14 CFR 61.31(f) and (i).

[64] 14 CFR 61.31(e)(1).

[65] In the NPRM, the FAA proposed that the cost savings benefits allowing the use of TAAs would be about $9.7 million or $8 million in present value at a 7 percent discount rate. While the commenter did not explain where he came up with $1.6 million, the FAA assumes that the commenter divided $8 million by 5 years because the FAA estimated the net quantifiable present value benefits over a 5 year analysis period.

[66] NTSB data available at *https://app.ntsb.gov/avdata/* or contact the National Transportation Safety Board at 202–314–6000 and ask to be transferred to the Safety Research and Statistical Analysis Division and request a query of the database.

[67] 81 FR 29719, May 12, 2016 (and the associated regulatory evaluation).

[68] The General Aviation Manufacturers Association website shows Cessna has not produced a piston engine retractable gear airplane since 1985 and Piper has produced only 28 piston engine airplanes with retractable gear since 2008 (16 being the Piper Arrow model). Production for Beechcraft is also at an all-time low for piston single engine airplanes with retractable gear.

than a TAA.[69] It may be true that there are older less expensive complex airplanes available, but again, the limited availability, difficulty of obtaining parts and the cost associated with maintenance and refurbishing these older aircraft, makes their use cost prohibitive.

The FAA also received comments on ensuring the flight instructor providing the training in a complex airplane or TAA is qualified to provide the training. Specifically, SAFE recommended the FAA amend § 61.195 to require a flight instructor to have at least 10 hours of PIC time in a complex airplane prior to giving instruction in a complex airplane and at least 10 hours of PIC time in a TAA prior to giving instruction in a TAA. An individual also recommended requiring flight instructors to have 10 hours of PIC time in a complex airplane.

The FAA is not requiring a flight instructor to obtain a minimum of 10 hours as PIC in a complex airplane prior to instructing in a complex airplane. As discussed previously, the FAA finds that the current training and endorsement requirement to act as PIC of a complex airplane as set forth in § 61.31, in conjunction with the flight instructor's demonstrated knowledge of the fundamentals of instruction, is sufficient to ensure that this type of training is provided effectively. Furthermore, the ability to provide training in a complex airplane without having been evaluated on a practical test is consistent with other § 61.31 endorsements, including high performance aircraft, tailwheel aircraft, and high altitude operations.

Additionally, the FAA is not requiring a flight instructor to obtain 10 hours as PIC in a TAA prior to instructing in a TAA. The proposal was intended only to introduce commercial pilot candidates to TAAs. Flight instructors are currently permitted to provide flight training in airplanes with glass-cockpits without having to receive any specific amount of training in the aircraft. Therefore, allowing a flight instructor to provide flight instruction in a TAA without first receiving extensive training in the TAA will not result in a decreased level of safety. Flight instructors have the responsibility of ensuring their familiarity with an aircraft prior to providing flight instruction in that aircraft.

Furthermore, since the NPRM, the FAA has determined that the requirement in § 61.129(b)(3)(ii) that a seaplane have flaps and a controllable pitch propeller has not been updated to reflect the revised definition of ''complex airplane'' in § 61.1. In 2011, the FAA amended the definition of ''complex airplane'' to include airplanes and seaplanes equipped with a full authority digital engine control (FADEC).[70] The FAA is, therefore, adding language to § 61.129(b)(3)(ii) to accommodate seaplanes equipped with a FADEC consistent with the definition of complex airplane in § 61.1.

3. Amendments to Commercial Pilot and Flight Instructor Practical Test Standards

In the NPRM, the FAA proposed to revise the commercial pilot single engine airplane practical test standards (PTS) to permit the use of a TAA in place of a complex or turbine-powered airplane during the initial practical test.[71] The FAA also proposed to revise the flight instructor single engine airplane PTS to permit the flight instructor applicant to use a TAA during the initial practical test.

AOPA supported the proposed changes to the commercial pilot and flight instructor PTS because they are necessary to carry out the proposed amendments to § 61.129(c)(3)(ii) and appendix D to part 141.

UND recommended the FAA not require an applicant to use a TAA for the flight instructor practical test. UND described that, according to the flight instructor single engine airplane PTS, the TAA would be needed for ''takeoff and landing maneuvers as well as appropriate emergency procedures'' and questioned why a two axis autopilot is needed to demonstrate proficiency for takeoff and landings in a VFR traffic pattern. UND suggested that this PTS requirement should be removed from a PTS that focuses on VFR maneuvers. UND requested the removal of both the complex airplane and the TAA airplane requirement from the flight instructor single engine airplane PTS.

Upon further review, the FAA decided not to revise the commercial pilot airman certification standards (ACS) and flight instructor PTS to include the option to use a TAA during the commercial pilot (single-engine airplane) or flight instructor (single-engine airplane) practical tests.[72] Instead, the FAA removed from the commercial pilot ACS the requirement to provide a complex or turbine powered airplane for the initial practical test.[73] Additionally, the FAA removed from the flight instructor PTS the requirement to provide a complex airplane for the practical test.[74]

As explained in the NPRM, there are far fewer single engine complex airplanes available to meet the ACS requirement, and the single engine complex airplanes that are available are older aircraft that are expensive to maintain. Revising the airmen certification standards to include the option to use a TAA for the commercial pilot and flight instructor practical tests would have alleviated some of the cost, maintenance and production issues associated with single engine complex airplanes. However, the FAA found that removing the ACS requirements to furnish a complex or turbine powered airplane achieves the same objectives. Additionally, the FAA determined that removing these ACS/PTS requirements, rather than adding the option to use a TAA, more significantly reduces costs for persons pursuing a commercial pilot or flight instructor certificate by allowing applicants to utilize less expensive airplanes on the practical test that are not turbine driven, complex, or technically advanced. Furthermore, the FAA found that no longer requiring a complex airplane to be furnished for the initial commercial pilot or flight instructor practical test will not result in a decreased level of safety. Airplanes provided for the practical test will be less complex, newer, and not as likely to fail due to mechanical and maintenance issues associated with older single engine complex airplanes. Additionally, prior to operating as PIC of a complex airplane, a pilot is still required to receive flight training and an endorsement from an authorized

[69] See *www.controller.com* (listing the price of a 2017 C–172 with G1000 equipment (non-complex) at $403,295 on June 15, 2017); SkyTech Piper Dealer (quoting the price of a 2017 Piper Arrow (complex) at $466,880 on June 15, 2017).

[70] Final Rule, ''Pilot in Command Proficiency Check and Other Changes to the Pilot and Pilot School Certification Rules, 76 FR 54095, 54101 (Aug. 31, 2011).

[71] Prior to this final rule, the commercial pilot PTS for airplane required a pilot to use a complex or turbine-powered airplane for takeoff and landing maneuvers and appropriate emergency tasks for the initial practical test for a commercial pilot certificate with an airplane category. Similarly, the flight instructor PTS for airplane required an instructor candidate to use a complex airplane for the performance of takeoff and landing maneuvers as well as appropriate emergency procedures.

[72] The FAA is in the process of replacing the practical test standards (PTS) with the airman certification standards (ACS).

[73] Notice N 8900.463, *Use of a Complex Airplane During a Commercial Pilot or Flight Instructor Practical Test* (Apr. 24, 2018) (outlining a change in policy regarding the testing of applicants for a commercial pilot or flight instructor certificate), available at *https://www.faa.gov/documentLibrary/media/Notice/N_8900.463.pdf.* The FAA no longer requires applicants for a commercial pilot certificate with an airplane single-engine rating to provide a complex or turbine-powered airplane for the associated practical test. *Id.*

[74] The FAA no longer requires applicants for a flight instructor certificate with an airplane single-engine rating to provide a complex airplane for the practical test. *Id.*

instructor certifying his or her proficiency in a complex airplane.[75]

The FAA concluded that any airplane may be used to accomplish the tasks described in the commercial pilot (single-engine) ACS or flight instructor (single-engine) PTS, provided that aircraft is capable of accomplishing all areas of operation required for the practical test and is the appropriate category and class for the rating sought.[76] Therefore, the aircraft used for the practical test must still meet the requirements specified in § 61.45.

E. Flight Instructors With Instrument Ratings Only

In the NPRM, the FAA proposed to revise § 61.195(b) and (c) to allow a flight instructor who holds only an instrument-airplane or instrument-helicopter rating on his or her flight instructor certificate to conduct instrument training.[77] As proposed, the flight instructor and the pilot receiving instrument training would both have been required to hold category and class ratings on their pilot certificates that are applicable to the aircraft in which the instrument training is accomplished. Therefore, under this proposal, the flight instructor would no longer have been required to hold the appropriate category and class ratings in addition to the instrument rating on his or her flight instructor certificate.

The FAA received four comments on this proposal. Three commenters supported the proposed changes to § 61.195(b) and (c); one individual opposed them.

American Flyers stated that if an instrument instructor holds the appropriate category and class on his or her commercial pilot certificate, he or she has already demonstrated proficiency on the tasks required for the commercial practical test. Eagle Sport stated that instrument procedures are standard across the board and instrument instructors should be qualified to teach them. One individual believed that removing the requirement of category and class for instrument instructors makes absolute sense and instrument flying and the regulations are the same no matter what aircraft is being flown.

The FAA recognizes that instrument procedures are fundamentally consistent within a particular category of aircraft and that the same instrument flight rules apply in the NAS regardless of what aircraft is being flown. However, upon further review, the FAA has determined that a flight instructor who does not possess an airplane category multiengine class rating on his or her flight instructor certificate has not been trained and tested on giving instruction in a multiengine airplane, specifically instruction on one-engine inoperative tasks. The Flight Instructor Instrument Practical Test Standards (PTS) are not the same for single-engine and multiengine airplanes because the PTS contains two tasks that are specific to multiengine airplanes.[78] If an applicant is completing the flight instructor instrument practical test in a multiengine airplane, the standards direct the examiner to have the applicant perform at least one of the following tasks: (1) An engine failure during straight-and-level flight and turns (Task IX. C); or (2) an instrument approach with one engine inoperative (Task IX. D).[79] Similarly, the Flight Instructor Airplane PTS contains additional tasks for persons completing the practical test in a multiengine airplane, including tasks related to operating a multiengine airplane with one engine inoperative. Therefore, a flight instructor who holds an instrument rating and an airplane category multiengine class rating on his or her flight instructor certificate has been trained and tested on conducting training in a multiengine airplane to include one-engine inoperative maneuvers and/or approaches. The FAA emphasizes that an initial flight instructor candidate who completes a flight instructor instrument-airplane rating practical test in a single engine airplane has not been trained and tested on providing instruction in a multiengine airplane to include these one-engine inoperative tasks.

In the interest of safety, the FAA has determined that, in order to provide instrument instruction in a multiengine airplane competently and safely, the flight instructor must have been trained and tested on giving instruction in a multiengine airplane including instruction on one-engine inoperative tasks. Any task required for the multiengine airplane rating has the potential for becoming a single engine operation. Verification of flight instructor proficiency in teaching emergency scenarios such as a loss of an engine during multiengine operations ensures that flight instructors can successfully mitigate such risk and safely provide instrument training in multiengine airplanes.

Therefore, the FAA is revising proposed § 61.195(c) by adding new paragraph (c)(2), which requires a flight instructor who possesses an instrument rating on his or her flight instructor certificate to also possess an airplane category multiengine class rating on his or her flight instructor certificate when conducting instrument training in a multiengine airplane.[80] Section 61.195(c)(1) contains the proposed requirement, which has been revised to apply only to flight instructors giving instrument instruction in aircraft other than multiengine airplanes. Thus, § 61.195(c)(1) allows an instrument-only flight instructor to conduct instrument training in an aircraft (other than multiengine airplanes) provided the instructor and the pilot receiving instrument training hold category and class ratings on their pilot certificates that are applicable to the aircraft in which the instrument training is accomplished.[81]

The FAA is also revising § 61.195(e) to clarify that a flight instructor may not give instrument training in an aircraft that requires the PIC to hold a type rating unless the flight instructor holds a type rating for that aircraft on his or her pilot certificate. While this revision was not proposed in the NPRM, flight instruction includes instrument training;[82] therefore, former § 61.195(e)

[75] 14 CFR 61.31(e).

[76] 14 CFR 61.45.

[77] Section 61.195 sets forth the limitations and qualifications for flight instructors. Prior to this final rule, under § 61.195(b), an instructor could not conduct flight training in any aircraft for which the instructor did not hold a pilot certificate and flight instructor certificate with the applicable category and class ratings for the aircraft in which the training was provided. Additionally, under § 61.195(c), a flight instructor who provided instrument training for the issuance of an instrument rating, a type rating not limited to VFR, or the instrument training required for commercial pilot and ATP certificates was required to hold an instrument rating on his or her pilot certificate and flight instructor certificate that was appropriate to the category and class of aircraft used for the training.

[78] FLIGHT INSTRUCTOR INSTRUMENT Practical Test Standards for AIRPLANE and HELICOPTER, FAA–S–8081–9D with Changes 1 & 2, U.S. Department of Transportation, Federal Aviation Administration (July 2010). In ''IX. Area of Operation: Emergency Operations,'' the FAA notes that ''[t]he examiner shall omit TASKS C and D unless the applicant furnishes a multiengine airplane for the practical test, then TASK C or D is mandatory.''

[79] The Flight Instructor Instrument PTS does not contain separate tasks for applicants completing the practical test in a multiengine helicopter.

[80] Section 61.195(c)(2) requires a flight instructor conducting instrument training in a multiengine airplane to meet the requirements of § 61.195(b), which requires the flight instructor to hold the applicable category and class rating on his or her flight instructor certificate.

[81] As the FAA noted in the NPRM, the powered-lift category does not contain any corresponding class ratings, on either a pilot certificate or flight instructor certificate.

[82] Under § 61.1, ''Instrument training'' means that time in which instrument training is received from

Continued

would have applied to flight instructors conducting instrument training under paragraph (c). The FAA is revising paragraph (e) only for clarity.

One individual, who is identified as a flight instructor, believed that an instrument-only flight instructor may not possess the skills necessary to manipulate the aircraft if the pilot flying loses control of the aircraft. The commenter further stated that instrument-only flight instructors do not have to demonstrate stalls or spin proficiency on the practical test, and described observing many pilots on instrument proficiency checks incorrectly recovering from an unusual attitude training event pushing the aircraft closer to a stall/spin scenario.

For the reasons explained above, the FAA agrees that an instrument-only flight instructor may not possess the skills needed to conduct instrument training in a multiengine airplane and is revising proposed § 61.195(c) accordingly. However, the FAA believes that a flight instructor with only an instrument-airplane rating or instrument-helicopter rating possesses the skills necessary to conduct instrument training in an aircraft (other than a multiengine airplane). The Flight Instructor Instrument Airplane and Helicopter PTS states that examiners shall place special emphasis upon areas of aircraft operations considered critical to flight safety, including positive aircraft control, stall/spin awareness, and other areas deemed appropriate to any phase of the practical test.[83] Additionally, because § 61.195(c)(1) requires the flight instructor and the pilot receiving the instrument training to hold on their pilot certificates the appropriate category and class ratings in advance of the instrument training, both the instructor and the applicant will have already been found proficient in stall prevention, recognition, and recovery for the aircraft in which the instrument training will be accomplished.

Furthermore, the FAA is revising and restructuring proposed § 61.195(b) for clarity. Proposed § 61.195(b)(2) would have required the flight instructor to hold a pilot certificate with a type rating, if appropriate. The FAA finds that this language could have been interpreted as requiring the flight instructor to hold a type rating, which was not the FAA's intent. Prior to this final rule, § 61.195(b) required a flight instructor to hold a type rating only if appropriate. The FAA did not propose to change this requirement. Therefore, the FAA is revising proposed § 61.195(b) to require the flight instructor to hold a flight instructor certificate appropriate to category and class; to hold a pilot certificate; and to meet the requirements of § 61.195(e), if applicable. Section 61.195(e) requires a flight instructor to hold a type rating on his or her pilot certificate if the aircraft requires the PIC to hold a type rating.

The FAA will revise FAA Order 8900.1 to be consistent with the flight instructor privileges and limitations associated with this rule. Additionally, these instructor privileges and limitations described for instrument training in an aircraft will also be applicable to training credits permitted when using an FFS, FTD, or ATD.[84]

F. Light-Sport Aircraft Pilots and Flight Instructors

1. Sport Pilot Flight Instructor Training Privilege

In the NPRM, the FAA proposed to add new § 61.412 to authorize a flight instructor with a sport pilot rating to provide training on control and maneuvering solely by reference to the instruments to sport pilot applicants receiving flight training for the purpose of solo cross-country requirements in an airplane that has a V_h greater than 87 knots CAS.[85] Because a flight instructor with a sport pilot rating is not evaluated on this instructional knowledge, the FAA proposed to require a flight instructor with a sport pilot rating to receive training and an endorsement from a flight instructor certificated under subpart H that affirms the flight instructor with a sport pilot rating has been found competent and is qualified to provide flight training on tasks and maneuvers performed solely by reference to the flight instruments.[86] Proposed § 61.412(b) would have required the flight instructor with a sport pilot rating to receive a minimum of 1 hour of ground training and 3 hours of flight training in an airplane with a V_h greater than 87 knots CAS or in a FFS or FTD that replicates an airplane with a V_h greater than 87 knots CAS.[87]

The FAA also proposed to revise § 61.415 by adding a new paragraph (h) to clarify that a flight instructor with a sport pilot rating may not conduct flight training on control and maneuvering an aircraft solely by reference to the instruments in an airplane that has a V_h greater than 87 knots CAS without meeting the requirements in proposed § 61.412. Additionally, the FAA proposed to revise § 91.109(c) to permit a flight instructor with a sport pilot rating who has obtained the endorsement proposed in § 61.412 to serve as a safety pilot only for the purpose of providing flight training on control and maneuvering solely by reference to the instruments to a sport pilot applicant seeking a solo cross country endorsement in an airplane with a V_h greater than 87 knots CAS.

The FAA received six comments regarding this proposal. All commenters supported the FAA allowing flight instructors with a sport pilot rating to provide training to sport pilot applicants on control and maneuvering solely by reference to the flight instruments. However, each commenter expressed concern and offered revisions to proposed § 61.412.

AOPA, Chesapeake Sport Pilot (2 individuals), and one individual recommended the FAA except flight instructors with a sport pilot rating who also hold at least a private pilot certificate with a single-engine airplane rating from the proposed § 61.412 training requirement.

The FAA is not providing an exception to the training and endorsement requirements of § 61.412 for flight instructors with a sport pilot rating who also possess a private pilot certificate or higher. As the FAA explained in the NPRM, § 61.412(b) involves flight training for the purpose of giving instruction on control and maneuvering solely by reference to the instruments. While a person who holds at least a private pilot certificate with a single-engine airplane rating has received three hours of flight training in a single-engine airplane on the control

an authorized instructor under actual or simulated conditions.

[83] FLIGHT INSTRUCTOR INSTRUMENT Practical Test Standards for AIRPLANE and HELICOPTER, FAA–S–8081–9D with Changes 1 & 2, U.S. Department of Transportation, Federal Aviation Administration (July 2010).

[84] 14 CFR 61.65(h) and (i).

[85] Prior to this final rule, a flight instructor with a sport pilot rating was not allowed to provide training on control and maneuvering solely by reference to the instruments. However, sport pilot applicants are required to receive this training for the purpose of solo cross-country requirements in an airplane that has a V_h greater than 87 knots CAS. 14 CFR 61.93(e)(12). Therefore, prior to this final rule, sport pilot applicants were required to obtain this training from a flight instructor certificated under subpart H of part 61.

[86] A flight instructor with a sport pilot rating is not required to receive this endorsement. The endorsement will only be required if the flight instructor with a sport pilot rating seeks the privilege of providing training to sport pilot applicants on maneuvering solely by reference to the flight instruments.

[87] Private pilot applicants have a similar requirement under § 61.109(a)(3) that requires 3 hours of flight training in a single-engine airplane on the control and maneuvering of an airplane solely by reference to instruments, including straight and level flight, constant airspeed climbs and descents, turns to a heading, recovery from unusual flight altitudes, radio communications, and the use of navigation systems/facilities and radar services appropriate to instrument flight.

and maneuvering of an airplane solely by reference to the instruments pursuant to § 61.109(a)(3), he or she has not received training specific to ''giving instruction'' on control and maneuvering solely by reference to the instruments. Therefore, the training requirements of § 61.412(b) are not duplicative to § 61.109(a)(3).

Eagle Sport LLC commented that requiring a flight instructor with a sport pilot rating to obtain additional instruction and an endorsement in order to provide training on control and maneuvering solely by reference to the flight instruments is needlessly cumbersome. One individual commenter suggested that an endorsement may be sufficient (without the need for a specific training time requirement).

The FAA is requiring a flight instructor with a sport pilot rating to receive and log a minimum of one hour of ground training and three hours of flight training, as proposed. As stated in the NPRM,[88] the basic instrument flight training should involve flight training for the purpose of giving instruction on control and maneuvering solely by reference to the flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and air traffic control directives.[89] Therefore, § 61.412(c) requires a flight instructor with a sport pilot rating to receive training for the purpose of giving instruction on the tasks specified in § 61.93(e)(12), as proposed. The FAA believes that a minimum amount of training time on the tasks specified in § 61.412(c) and an endorsement certifying proficiency in those tasks are necessary to ensure that a flight instructor with only a sport pilot rating has the experience, proficiency, and skills necessary to provide his or her sport pilot students with the training and skills required to safely operate a light-sport aircraft solely by reference to the flight instruments.[90]

SAFE agreed that a one-time endorsement is appropriate, but asserted that the minimum training requirement is insufficient. SAFE recommended that the flight instructor with a sport pilot rating be required to demonstrate all the tasks described in the Private Pilot ACS Area VIII, Task F.

The FAA disagrees with SAFE's assertion. The training and subsequent endorsement that will be provided to the flight instructor with a sport pilot rating is not meant to be a practical test and should not be treated as such. The instructor providing the training can make the determination of competency without referencing the PTS standards. The training and endorsement required under § 61.412 is similar in nature to the other training and endorsements instructors provide, such as for high performance, complex, or tailwheel airplanes.

SAFE also stated that it is unclear what ''use of radio aids and ATC directives'' means under proposed § 61.412(c). To more clearly define it, SAFE suggested referencing the ''Private Pilot ACS Area VIII, Task F, Radio Communications, Navigation Systems/Facilities, and Radar Services'' instead.

Because § 61.412(c) requires the flight instructor with a sport pilot rating to receive an endorsement certifying that the instructor is proficient in providing the flight training specified in § 61.93(e)(12), the FAA is describing the flight training in § 61.412(c) by using language that mirrors the language of § 61.93(e)(12). Thus, the language ''use of radio aids and ATC directives'' does not introduce a new concept into the regulations. It has been used in 14 CFR 61.93 since 1997.[91] Flight instructors authorized under subpart H of part 61 have been conducting the flight training required by § 61.93, which includes ''use of radio aids and ATC directives,'' for over 20 years. The FAA believes the phrase ''use of radio aids and ATC directives'' is sufficiently clear.

SAFE also stated that it is unclear what type of instructor would be authorized under subpart H. SAFE questioned if this should be any flight instructor that meets the appropriate category and class requirement, an instrument flight instructor, or an instructor who meets the requirements to provide instruction for an initial flight instructor certificate applicant. SAFE suggested the training be provided by an instructor with substantial experience who also meets the requirements to provide training for the initial flight instructor certificate.

The FAA intended for any flight instructor authorized under subpart H to provide the requisite training and endorsement to a flight instructor with a sport pilot rating. However, in its own continued review of the NPRM, the FAA discovered that the express language of § 61.195(c) would have prohibited an instrument-only flight instructor from providing flight training on the control and maneuvering of an airplane solely by reference to the flight instruments. As explained in the NPRM, a subpart H instructor is instrument rated and knowledgeable on the appropriate techniques for safely accomplishing flight by reference to the flight instruments. Because flight training on the control and maneuvering of an airplane solely by reference to the flight instruments is not instrument training, it may be provided by a flight instructor who does not hold an instrument rating on his or her flight instructor certificate.[92] The FAA, therefore, concludes that a flight instructor who holds an instrument rating on his or her flight instructor certificate that is appropriate to the aircraft in which the training is provided should also be allowed to provide flight training on the control and maneuvering of an airplane solely by reference to the flight instruments. Accordingly, the FAA is adding new paragraph (l) to § 61.195 to expressly allow an instrument-only instructor to provide this training notwithstanding § 61.195(c).

The FAA understands that a flight instructor with a sport pilot rating has already demonstrated proficiency in the fundamentals of instruction and course development. A flight instructor with a sport pilot rating is evaluated and then qualified on the fundamentals of flight instruction before receiving a flight instructor certificate.[93] That same flight instructor with a sport pilot rating will then receive additional training from a flight instructor authorized under subpart H, specific to giving instruction on control and maneuvering solely by reference to the instruments. The FAA believes this will enable the flight instructor with a sport pilot rating to provide the training under § 61.93(e)(12) effectively and safely.

AOPA recommended the FAA revise proposed § 61.412(b) to allow flight instructors with a sport pilot rating to receive the required three hours of flight training in an ATD. AOPA explained

[88] 81 FR at 29734.

[89] 14 CFR 61.93(e)(12).

[90] Section 61.315 prescribes the privileges and limitations of a person who holds a sport pilot certificate. Under § 61.315(c), a person who holds a sport pilot certificate may not act as PIC of a light sport aircraft when the flight or surface visibility is less than 3 statute miles, or without visual reference to the surface. The FAA notes that receiving flight instruction on control and maneuvering solely by reference to the flight instruments does not give a sport pilot privileges to operate contrary to the limitations established in § 61.315(c).

[91] Final Rule, ''Pilot, Flight Instructor, Ground Instructor, and Pilot School Certification Rules,'' 62 FR 16220 (Apr. 4, 1997).

[92] Legal Interpretation, Letter to Scott Rohlfing from Lorelei Peter, Acting Assistant Chief Counsel for Regulations (Feb 24, 2016); Legal Interpretation, Letter to Taylor Grayson from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (Jan. 4, 2010); Legal Interpretation, Letter to Taylor Grayson from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (July 6, 2010).

[93] FAA–S–8081–29 SPORT PILOT Practical Test Standards for Flight Instructor Pg. 4–13, I. AREA OF OPERATION: FUNDAMENTALS OF INSTRUCTING.

that a flight instructor with a sport pilot rating who holds an endorsement under § 61.327(b) has already been found proficient in an airplane with a V_h greater than 87 knots CAS. Additionally, because the flight instructor with a sport pilot rating and the sport pilot student will not be rated to fly under IFR, all the training to be conducted under proposed §§ 61.412 and 61.93(e)(12) will be performed under simulated instrument meteorological conditions, not actual instrument meteorological conditions. Lastly, AOPA also stated that limitations on the use of certain ATDs being used for this type of flight training can be imposed by the LOA process when the FAA evaluates and approves an ATD.

The FAA recognizes that proposed § 61.412(b) would have allowed the three hours of flight training to be conducted in an airplane with a V_h greater than 87 knots CAS, or in a FFS or FTD that replicated an airplane with a V_h greater than 87 knots CAS. The FAA did not intend to preclude the use of ATDs under this provision. Because ATDs are currently permitted to satisfy training requirements for the instrument rating and recency, the FAA finds that they should also be allowed to satisfy the flight training requirements of § 61.412(b). Accordingly, the FAA is revising proposed § 61.412(b) to also allow the use of ATDs, as AOPA recommended.

AOPA also recommended clarifying changes to proposed § 61.412. First, AOPA recommended revising the proposed rule language to clarify that the solo cross-country endorsement is not issued pursuant to § 61.93(e)(12). Rather, the required flight training maneuvers and procedures are listed under § 61.93(e)(12). Second, AOPA stated that § 61.327 requires two different endorsements. AOPA recommended referencing § 61.327(b), rather than § 61.327 in its entirety, because paragraph (b) requires the endorsement for sport pilots who want to operate a light-sport aircraft that has a V_h greater than 87 knots CAS.

The FAA is revising proposed § 61.412 to clarify that the flight training on control and maneuvering an aircraft solely by reference to the instruments is provided under § 61.93(e)(12), and the solo cross-country endorsement is issued under § 61.93(c)(1). Additionally, the FAA is using the phrase ''student pilot seeking a sport pilot certificate,'' rather than the proposed term ''sport pilot applicant,'' because it more accurately describes the pilots who must obtain the solo-cross country endorsement under § 61.93(c)(1). The phrase ''student pilot seeking a sport pilot certificate'' is also consistent with the terminology that exists in current § 61.93(e)(12). Furthermore, the FAA is referencing § 61.327(b) for the reasons identified by AOPA.

Eagle Sport LLC expressed concern with requiring student pilots seeking a sport pilot certificate to receive training on flight solely by reference to the flight instruments as part of training for cross-country flight if operating a light sport airplane that has a V_h greater than 87 knots CAS.

This requirement has existed since February 1, 2010.[94] The NPRM did not propose any changes to this requirement; therefore, Eagle Sport LLC's comments on this provision are outside the scope of this rulemaking.

One commenter recommended the FAA add instrument time to the requirements for flight instructors with a sport pilot rating. The FAA is not adopting this recommendation. The FAA finds it unnecessary to require a flight instructor with a sport pilot rating to obtain instrument training because a sport pilot may not operate when the flight or surface visibility is less than 3 statute miles, or without visual reference to the surface.[95]

The FAA notes that §§ 61.415 and 91.109 remain unchanged from the NPRM. The FAA also notes that it will revise AC 61–65F to include the appropriate endorsement language that can be used when authorizing a flight instructor with a sport pilot rating.

2. Credit for Training Obtained as a Sport Pilot

In the NPRM, the FAA proposed to revise § 61.99 and add new § 61.109(l) to allow a portion of the flight training received from a sport pilot instructor who does not also hold a flight instructor certificate issued under the requirements in subpart H to be credited toward a portion of the flight training requirements for a recreational or private pilot certificate with airplane, rotorcraft, or lighter-than-air categories.[96] The FAA proposed that any training received from a sport pilot instructor that would be credited must be completed in an aircraft appropriate to the category and class rating for the recreational or private pilot certificate sought.[97]

As an alternative, the FAA considered allowing all training received from a sport pilot instructor to be credited by an applicant seeking a recreational or private pilot certificate. An applicant would still be required to obtain a minimum of three hours of training in preparation for the practical test (within the preceding 2 calendar months) from a flight instructor under subpart H,[98] as well as be endorsed by a flight instructor under subpart H as being prepared for the required practical test. The FAA sought public comment, and any associated data, on this alternative.

The FAA received 13 comments on this proposal. Twelve commenters supported the proposed rule changes; one commenter opposed them.

EAA, AOPA, one individual, and two commenters writing on behalf of Chesapeake Sport Pilot recommended that all the training time received from a flight instructor with a sport pilot rating be allowed for credit for the recreational or private pilot certificate. Both EAA and AOPA indicated that the same fundamental knowledge is required for the sport pilot certificate as other pilot certificates, that many of the flight training requirements and tasks

[94] Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft; Modifications to Rules for Sport Pilot, 75 FR 5204 (Feb. 1, 2010). The FAA removed the training requirement for student pilots seeking a sport pilot certificate to receive training in the control and maneuvering of an airplane solely by reference to flight instruments prior to conducting solo cross-country flight in an aircraft other than airplanes with a V_H greater than 87 knots CAS. 75 FR at 5211.

[95] 14 CFR 61.315(c).

[96] Under § 61.51(h), a person may log training time when that person receives training from an authorized instructor in an aircraft, FFS, or FTD. A sport pilot instructor is not authorized to conduct training for a recreational pilot certificate or a private pilot certificate with airplane, rotorcraft, glider, or lighter-than-air category ratings. 14 CFR 61.413. Therefore, prior to this final rule, under § 61.51(h), a pilot could not count flight training received from a flight instructor with only a sport pilot rating (subpart K instructor) towards the training requirements for a recreational pilot certificate or private pilot certificate with category ratings other than powered parachute and weight-shift control aircraft.

[97] For the airplane category single engine class, the FAA proposed to allow 10 hours of sport pilot training to be credited toward the 15 hours of training required for a recreational pilot certificate and toward the 20 hours of training required for the private pilot certificate. For the rotorcraft category gyroplane class, the FAA proposed to allow 10 hours of sport pilot training to be credited toward the 15 hours of training required for the recreational pilot certificate and toward the 20 hours of training required for the private pilot certificate. For the lighter-than-air category airship class, the FAA proposed to allow 12.5 hours of sport pilot training to be credited toward the 25 hours of training required for the private pilot certificate. For the lighter-than-air category balloon class, the FAA proposed to allow 5 hours of sport pilot training, including 3 training flights with an authorized instructor, to be credited toward the 10 hours of flight training, including 6 training flights with an authorized instructor, required for a private pilot certificate.

[98] 14 CFR 61.109(a)(4), (d)(3), and (g)(3). The FAA notes, however, that a person who applies for a private pilot certificate with a lighter-than-air category and balloon class rating is required to obtain a minimum of 2 hours in preparation for the practical test within the preceding 2 calendar months from the month of the test. 14 CFR 61.109(h)(1) and (2).

are the same, and that the credit limit does not provide a safety benefit. AOPA stated there are sufficient safeguards in place, including subpart H instructor training and endorsements, to ensure that a sport pilot will be properly qualified for the recreational or private pilot certificate and to ensure there is not a reduction in proficiency or safety. EAA and one individual stated that a flight instructor with a sport pilot rating is equally capable of providing instruction on the areas common to the sport, recreational, and private pilot certificates as a subpart H instructor. Several commenters, including EAA, noted how the proposal would lower the cost and provide a viable path for those pursuing higher certificates. One individual supported the proposal, noting how the current regulations imply that a flight instructor with a sport pilot rating is less qualified than a subpart H instructor.

After review of the comments and further analysis, the FAA has decided to allow all training received from a flight instructor with a sport pilot rating to be credited by an applicant seeking a recreational or private pilot certificate. The FAA recognizes that an applicant for a sport pilot certificate must complete flight training on many of the same areas of operation required for a recreational or private pilot certificate.[99] Additionally, as explained in the NPRM, many of the tasks and maneuvers outlined in the practical test standards for a sport pilot are the same as those outlined in the practical test standards for recreational or private pilot.[100] In fact, these areas of operation must be performed to identical proficiency standards.[101] Therefore, the FAA believes that all training received as a sport pilot candidate is relative to the aeronautical experience required for a higher certificate. Accordingly, the FAA is not going to limit the sport pilot training that may be credited toward a higher certificate to a prescriptive number of hours. The FAA notes, however, that sport pilots applying for a higher certificate are still required to complete all the requirements for the specific certificate or rating sought, which includes additional training provided by a subpart H instructor and successful completion of the knowledge test and practical test.[102]

Additionally, before receiving solo cross-country privileges, all student pilots pursuing a sport pilot (in airplanes with a V_h greater than 87 knots calibrated airspeed (KCAS)), recreational pilot, or private pilot certificate in a single engine airplane must receive the training specified in § 61.93(e)(12) that includes control and maneuvering solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and ATC directives. In recognition that these training tasks are similar to the ones described in § 61.109(a)(3), which requires ''control and maneuvering of an airplane solely by reference to instruments, including straight and level flight, constant airspeed climbs and descents, turns to a heading, recovery from unusual flight attitudes, radio communications, and the use of navigation systems/facilities and radar services'', the FAA will allow training tasks described in § 61.93(e)(12) provided to a sport pilot candidate by a flight instructor with a sport pilot rating, to be credited toward the private pilot training requirements specified in § 61.109(a)(3). This training credit will only be applicable if the training was provided by a flight instructor with a sport pilot rating who has received the training and endorsement required by § 61.412.[103] However, the FAA has identified that the requirement for training specific to ''recovery from unusual attitudes'' specified in § 61.109(a)(3) must be accomplished by a subpart H instructor. Sport pilot candidates are not required to receive training on recovery from unusual attitudes under § 61.93(e)(12). Therefore, § 61.412, which allows flight instructors with a sport pilot rating to provide the flight training under § 61.93(e)(12) provided the training and endorsement requirements are satisfied, does not require flight instructors with a sport pilot rating to receive training from a subpart H instructor on recovery from unusual attitudes.

A student pilot seeking a sport pilot certificate is not tested on basic instrument maneuvers during the sport pilot practical test.[104] However, the holder of a sport pilot certificate who seeks a private pilot certificate will be required under § 61.109(a)(4) to receive 3 hours of flight training in a single-engine airplane with a flight instructor authorized under subpart H in preparation for the private pilot practical test. Because a large portion of the Private Pilot ACS requires a demonstration of basic instrument flight maneuvers, a flight instructor under subpart H must observe an applicant's proficiency before endorsing the student pilot for the private pilot practical test.[105] As such, even though a sport pilot may credit basic instrument flight training received from a flight instructor with a sport pilot rating toward § 61.109(a)(3), an applicant for a private pilot certificate will likely receive as part of the training required by § 61.109(a)(4) a substantial amount of flight training from a subpart H flight instructor on basic instrument flight maneuvers, including straight and level flight, constant airspeed climbs and descents, turns to a heading, recovery from unusual flight attitudes, radio communications, and the use of navigation systems/facilities and radar services appropriate to instrument flight. Furthermore, a designated pilot examiner (DPE) will observe and test the private pilot candidate on these basic instrument maneuvers according to the proficiency standards in the private pilot ACS.

The FAA agrees with AOPA that sufficient safeguards are in place to prevent any reduction in safety, including the additional training and recommendations[106] required and provided by a subpart H instructor and the requirement for the applicant to pass a knowledge test and practical test to the standards specified for that grade of certificate. These safeguards would also include any additional training not provided by a flight instructor with a sport pilot rating that is explicit to the recreational or private pilot certificate.[107] As previously stated, an applicant is also required to receive at least 3 hours of training in preparation for the practical test (within 2 calendar

[99] 81 FR at 29735.

[100] *Id.*

[101] *Id.*

[102] Sections 61.99 and 61.109 contain the aeronautical experience requirements for recreational and private pilot certificates, respectively.

[103] The FAA is adopting new § 61.412 in this final rule. Section 61.412 allows a flight instructor with a sport pilot rating to provide flight training under § 61.93(e)(12) on control and maneuvering an aircraft solely by reference to the flight instruments for the purpose of issuing a solo cross-country endorsement under § 61.93(c)(1) to a student pilot seeking a sport pilot certificate, provided the flight instructor with a sport pilot rating holds an endorsement required by § 61.327(b), has received and logged the required training specified in § 61.412(b) from an authorized instructor, and has received a one-time endorsement from a flight instructor authorized under subpart H who certifies that the person is proficient in providing training on control and maneuvering solely by reference to the instruments in an airplane with a V_h greater than 87 knots CAS. See Section III.E.1. Sport Pilot Flight Instructor Training Privilege of this final rule.

[104] Sport Pilot Practical Test Standards (FAA–S–8081–29 Change 1, 2 and 3).

[105] 14 CFR 61.103(f), and Private Pilot Certification Standards (FAA–S–ACS–6A Change 1).

[106] Authorized instructor recommendations include signing the applicant's pilot logbook record and airman application certifying he or she is prepared and qualified for the test.

[107] For example, an applicant for a private pilot certificate will still be required to receive night training and additional cross-country training requirements. 14 CFR 61.109.

months preceding the month of application) from a flight instructor qualified under subpart H.[108] This includes an endorsement from the flight instructor certifying that the applicant received training on the applicable areas of operation for the certificate sought and is prepared for the practical test.

For the reasons discussed above, the FAA is revising § 61.99 and adding new paragraph (l) to § 61.109 to allow all flight training received from a flight instructor with a sport pilot rating to be credited toward the aeronautical experience requirements of §§ 61.99 and 61.109, provided certain conditions are met. The FAA notes that proposed § 61.109(l) would have allowed only a certain amount of sport pilot training to be credited toward the private pilot certificate based on the specific aircraft category and class rating sought. Because the FAA is now allowing all sport pilot training to be credited, the FAA is revising proposed § 61.109(l) to no longer differentiate credit based on specific aircraft categories and classes and to clarify the conditions under which a sport pilot may credit sport pilot training toward a private pilot certificate. Therefore, new § 61.109(l) allows the holder of a sport pilot certificate to credit flight training received from a flight instructor with a sport pilot rating toward the aeronautical experience requirements of § 61.109 if the conditions specified in paragraphs (l)(1) through (3) are satisfied.

Section 61.109(l)(1) requires the flight training to be accomplished in the same category and class of aircraft for which the rating is sought. This requirement is consistent with the NPRM, which stated that any training received from a sport pilot instructor that would be credited under this rule must be completed in an aircraft appropriate to the category and class rating for the recreational or private pilot certificate sought.[109] Section 61.109(l)(2) requires the flight instructor with a sport pilot rating to be authorized to provide the flight training. This requirement is consistent with the NPRM, which explained that the FAA was not proposing to expand the privileges of a flight instructor who holds only a sport pilot rating,[110] other than as discussed in section III.E.1 of this preamble.[111] The FAA emphasizes that flight instructors with a sport pilot rating are still subject to the privileges and limitations of their flight instructor certificate.[112] Therefore, a flight instructor with a sport pilot certificate is not authorized to provide flight training under subpart H to a recreational or private pilot candidate. Lastly, paragraph (l)(3) requires the flight training to include either: (i) Training on areas of operation that are required for both a sport pilot certificate and a private pilot certificate; or (ii) training on the control and maneuvering of an airplane solely by reference to the flight instruments, provided the training was received from a flight instructor with a sport pilot rating who holds an endorsement required by § 61.412(c). The FAA finds that new paragraph (l)(3)(i) is consistent with the NPRM, which explained that the FAA was proposing to allow sport pilot training to be credited toward the flight training requirements of a recreational or private pilot certificate because of the common areas of operation and proficiency standards in flight training for sport pilots, recreational pilots, and private pilots.[113] As explained above, the FAA is adding new § 61.109(l)(3)(ii) because new § 61.412 of this final rule will allow sport pilots to receive the training specified in § 61.93(e)(12) from flight instructors with a sport pilot rating if the training and endorsement requirements of § 61.412 are met.[114]

The FAA is revising proposed § 61.99(b) to be consistent with the reorganization of proposed § 61.109(l).

SAFE commented that pilot certification under part 61 is based on demonstrated performance. Therefore, if a sport pilot meets the required performance standards, the pilot should not have to accomplish additional training just because the previous training was provided by a subpart K instructor.

The FAA notes that pilot certification under part 61 is based on more than flight proficiency. An applicant for a pilot certificate must meet all the applicable aeronautical knowledge, flight proficiency, and aeronautical experience requirements. Sections 61.99 and 61.109, which contain the aeronautical experience requirements for a person who applies for a recreational or private pilot certificate, respectively, prescribes flight training and experience requirements above those that are required for a sport pilot certificate.[115] Therefore, while this rulemaking allows a sport pilot to credit flight training received from a flight instructor with a sport pilot rating toward the flight training requirements for a recreational or private pilot certificate, that pilot is still required to accomplish additional flight training and experience requirements that exceed those required for a sport pilot certificate. These additional requirements include additional training (*e.g.* night training), verification of proficiency, and a recommendation from a flight instructor (qualified under subpart H) that the applicant is prepared for the practical test for the recreational or private pilot certificate.

One individual suggested that if a private pilot candidate can credit time in a light sport aircraft, then the FAA should allow a sport pilot candidate to credit his or her sport pilot training toward the private pilot certificate in the future.

This final rule allows an applicant for a higher pilot certificate who receives flight training from a flight instructor with a sport pilot rating, to credit that pilot time toward the aeronautical experience requirements for a recreational or private pilot certificate. This can include training accomplished in a Light Sport Aircraft (LSA).

[108] 14 CFR 61.109(a)(4), (d)(3), (g)(3).

[109] 81 FR at 29735.

[110] 81 FR at 29735.

[111] As explained in section III.E.1 of this preamble, new § 61.412 authorizes flight instructors with sport pilot ratings to provide training on control and maneuvering solely by reference to the instruments to sport pilot applicants receiving flight training for cross-country flight in an airplane that has a V_h greater than 87 knots CAS.

[112] Section 61.413 prescribes the privileges of a flight instructor certificate with a sport pilot rating. Section 61.415 prescribes the limits of a flight instructor certificate with a sport pilot rating. Section 61.315 prescribes the privileges and limits of a sport pilot certificate. More specifically, the FAA notes that § 61.315(c) prohibits a sport pilot from acting as PIC of a light sport aircraft at night, and § 61.415(c) prohibits a flight instructor with a sport pilot rating from providing training to operate a light sport aircraft in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or at an airport having an operational control tower, unless the instructor has the endorsement specified in § 61.325, or is otherwise authorized to conduct operations in this airspace and at these airports. Therefore, a flight instructor with a sport pilot rating is not authorized to provide flight training at night and may not be authorized to provide flight training at an airport with an operating control tower.

[113] 81 FR at 29735.

[114] Under § 61.93(e)(2), when a student pilot seeking a sport pilot certificate receives training for cross-country flight in an airplane that has a V_h greater than 87 knots CAS, that student pilot must receive and log flight training in a single-engine airplane on control and maneuvering solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and ATC directives.

[115] For example, §§ 61.99(a)(2) and 61.109 require a person to receive 3 hours of flight training with an authorized instructor in the aircraft for the rating sought in preparation for the practical test within the preceding 2 calendar months. Section 61.109 also requires 3 hours of night training, 3 hours of flight by reference to instruments, operations at an airport with an operating control tower, and some additional cross-country time requirements. The FAA notes that night and instrument time are not required for balloon, powered parachute, or weight-shift control aircraft at the private pilot certification level.

Both EAA and Chesapeake Sport Pilot discussed that allowing only partial credit would have placed undue burden on designated pilot examiners when trying to differentiate training provided by a subpart K instructor verses a subpart H instructor since this time is documented as ''dual'' instruction in a person's logbook.

Because the FAA is allowing full credit for training received as a sport pilot applicant, this alleviates concerns with differentiating training received from a subpart H instructor versus training received from a flight instructor with a sport pilot rating, when recording flight instruction in a person's logbook. Flight instructors provide additional details in the applicant's logbook other than just describing dual instruction. A subpart H instructor is required to provide a recommendation in the pilot applicant's logbook certifying that he or she has provided the required additional training referencing §§ 61.103(f), 61.107(b), and 61.109, for the private pilot certificate.[116] This same flight instructor will certify flight training entries, in which he or she was the instructor providing the training, in the student's logbook with a signature, flight instructor certificate number, and expiration date. This allows an examiner to verify that the additional flight training provided qualifies for the higher certificate.

The FAA notes that currently examiners are not required to verify the credentials of the recommending instructor unless there are extenuating circumstances such as ensuring the flight instructor meets the requirements of § 61.195(h). Section 61.59 provides safeguards to ensure that the training flight instructors provide is appropriate to the certificate or rating for which a student is applying.[117] Applicants have a responsibility to understand and be familiar with the qualifications of the person providing them training and recommendations. The FAA expects applicants to provide additional scrutiny to their own pilot records before providing them to an examiner or inspector, who will verify the applicant's experience and qualifications.

GAMA stated that since the publication of the proposed rule, the FAA replaced the PTS for private and sport pilots with the Airman Certification Standards (ACS), which became effective in June 2016. GAMA recommended referencing the ACS instead of the PTS to help facilitate the proposed changes in this rule.

The FAA implemented the ACS for Private Pilot Airplane on June 15, 2016, subsequent to the publication of the NPRM. Because the Private Pilot ACS for Airplane superseded the Private Pilot PTS for Airplane,[118] this final rule preamble refers to the Private Pilot ACS rather than the PTS. However, the FAA will continue to refer to the Sport Pilot PTS until it is replaced by the applicable ACS.[119]

One individual commenter opposed the provision. The commenter stated that a sport pilot instructor only has to have a private pilot certificate and no instrument rating. The commenter suggested that a sport pilot instructor does not have the appropriate experience and background to provide ''airline discipline,'' and claimed that sport pilot ratings are sought due to a non-requirement for a medical certificate. The individual claimed the ''general aviation safety record shows the need for rigorous, standardized training from the student's first flight.'' Additionally, this individual asserted that the private pilot certificate requires 20 hours of instruction from an authorized instructor who has a vastly superior background than a sport pilot instructor.

A flight instructor with a sport pilot rating is not required to possess a private pilot certificate. He or she is required to hold at least a sport pilot certificate with the category and class ratings or privileges, appropriate to the flight instructor certificate held.[120] The commenter's reference to ''airline discipline'' is irrelevant since those who possess a flight instructor certificate are not held to airline standards. Only those pursuing an airline transport pilot (ATP) certificate with an airplane category and multiengine class rating are required by regulation to be trained on air carrier operations as outlined in § 61.156. There is no doubt that a subpart H instructor must meet higher experience requirements than a flight instructor with a sport pilot rating. However, flight instructors with a sport pilot rating are trained and tested on the same fundamentals of instruction as a subpart H instructor. Additionally, flight instructors with a sport pilot rating provide flight training on many of the same tasks and maneuvers as subpart H instructors because many of the training requirements and practical test standards for the recreational and private pilot certificates are identical to those required for the sport pilot certificate. For example, as stated in the NPRM, ten of the twelve areas of operation required in the airplane practical test standards for private pilot are also listed in the airplane practical test standards for sport pilot.[121] These areas of operation must be performed to identical standards. Furthermore, sport pilots who pursue a recreational or private pilot certificate will still be required to receive additional training and endorsements from a subpart H flight instructor and meet the additional experience and proficiency requirements for that certificate. For example, an applicant for a recreational or private pilot certificate will still be required to receive a minimum of three hours of training within 2 calendar months of the practical test from a flight instructor certificated under subpart H.[122] A flight instructor certificated under subpart H is still required to conduct training on all the areas of operation and certify that the applicant is prepared for the practical test.[123] Thus, only a subpart H flight instructor may recommend an applicant for a recreational or private pilot practical test.

The fact that a flight instructor with a sport pilot rating does not have an instrument rating on his or her pilot certificate is not relevant because all the training that he or she provides must be accomplished under visual flight rules. This fact is also true for the majority of the flight training that a student receives in pursuit of a recreational or private pilot certificate.[124]

[116] AC 61–65F Certification: Pilots and Flight and Ground Instructors provides recommended endorsements and rule references.

[117] Section 61.59 governs the falsification, reproduction, or alteration of applications, certificates, logbooks, reports, or records.

[118] The Private Pilot PTS for Airplane was cancelled as of June 15, 2016.

[119] In light of GAMA's comment, however, the FAA has decided to update its terminology in 14 CFR to reflect the transition from the PTS to the ACS. For further explanation, see section III.L. of this final rule preamble.

[120] 14 CFR 61.403(c)

[121] 81 FR at 29735.

[122] *See* 14 CFR 61.99(a)(2) and 61.109(a)(4), (b)(4), (c)(3), (d)(3), (g)(3).

[123] 14 CFR 61.96(b)(5) and 61.103(f).

[124] The FAA also notes that, similar to a subpart H instructor providing flight training to a recreational or private pilot applicant, a flight instructor with a sport pilot rating is not required to have an instrument rating on his or her flight instructor certificate. As noted in several legal interpretations, a flight instructor who provides flight training on the ''control and maneuvering of an airplane solely by reference to the instruments'' is not required to hold an instrument rating on his or her flight instructor certificate. Legal Interpretation, Letter to Scott Rohlfing from Lorelei Peter, Acting Assistant Chief Counsel for Regulations (Feb. 24, 2016); Legal Interpretation, Letter to Taylor Grayson from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (Jan. 4, 2010); Legal Interpretation, Letter to Taylor Grayson from Rebecca B. MacPherson, Assistant Chief Counsel for Regulations (July 6, 2010). Under § 61.65(d)(2), ''the required instrument time other than instrument

Continued

The FAA notes that the commenter's statement about persons seeking sport pilot ratings due to the ability to fly without a medical certificate is not relevant to the FAA's proposal because the proposal was not specific to medical certification requirements. Furthermore, BasicMed now allows certain pilots to operate without a medical certificate, provided certain conditions and limitations are met.[125]

G. Pilot School Use of Special Curricula Courses for Renewal of Certificate

In the NPRM, the FAA proposed to amend § 141.5(d) to allow the FAA to issue or renew a pilot school certificate to a part 141 pilot school that holds a training course approval for special curricula courses based on their students' successful completion of end-of-course tests for these FAA approved courses.[126]

AOPA supported this proposal noting that it could benefit the flight training community by encouraging the development of more FAA-approved courses by part 141 schools and by encouraging existing flight schools to pursue part 141 certificates.

SAFE believed the proposed language would have significantly changed the effect § 141.5(d) has on pilot schools requesting approval or renewal of their certificates. SAFE asked the FAA to reconsider its use of the words ''all'', ''or'', and ''and,'' and to reword the proposed rule to ensure that the 80 percent or higher pass rate would be computed properly.

After reconsidering its use of the words ''all'' and ''and'' in the proposed rule, the FAA finds that proposed § 141.5(d), which would have required an applicant for a pilot school certificate to establish at least an 80 percent pass rate on the first attempt for all tests administered, accurately reflects the FAA's intent. Prior to 2009,[127] § 141.5(d) required at least 80 percent of all tests administered to be passed on the first attempt. In the 2009 final rule and subsequent technical amendment, the FAA made changes to § 141.5(d);[128] however, the FAA explained that the changes were intended to clarify, not alter, the existing rule requirements.[129] In a legal interpretation dated July 1, 2011, the FAA stated that ''the quality of training requirement under § 141.5(d) is calculated based on the percentage of successful first attempts on all knowledge tests, practical tests, and end-of-course tests for appendix K courses.'' [130] Because the FAA never intended to alter the requirement that ''at least 80 percent of all tests administered be passed on the first attempt,'' the FAA finds that proposed § 141.5(d) was accurately worded.

Section 141.5(d) remains unchanged from the NPRM. The FAA expects that a pilot school will utilize special curricula course graduations when applying for or renewing a pilot school certificate on or after the effective date of this provision, even if those special curricula course graduations occurred before the effective date of this new rule provision. Therefore, effective July 27, 2018, pilot schools will be able to immediately utilize graduates from special curricula courses to qualify for or renew their pilot school certificates as described in § 141.5(d).

H. Temporary Validation of Flightcrew Members' Certificates by Part 119 Certificate Holders Conducting Operations Under Part 121 or 135 and by Fractional Ownership Program Managers Conducting Operations Under Part 91, Subpart K

In the NPRM, the FAA proposed to amend §§ 121.383(c) and 135.95 to allow part 119 certificate holders conducting operations under part 121 or 135 to provide their flightcrew members a temporary verification document (valid for 72 hours) without the need of an FAA exemption.[131] The FAA also proposed to amend §§ 61.3(a) and 63.3(a) to permit the documents provided by certificate holders to be carried as an airman certificate or medical certificate, as appropriate.[132] The FAA proposed that a certificate holder would be required to obtain approval from the Principal Operations Inspector to exercise this privilege. The FAA also proposed to establish a process to facilitate approval of a Certificate Verification Plan via Operations Specifications (A063).[133]

The FAA received five comments from organizations and two comments from individuals.

Airlines for America (A4A), National Air Transportation Association (NATA), and Regional Air Cargo Carriers Association (RACCA) recommended the FAA clarify what an acceptable form of media is for the temporary validation document. A4A suggested revising proposed § 121.383(c) to clarify that the temporary document may be in either paper or electronic form. A4A noted that this clarification would standardize methods of documentation in the industry and, as more flight decks go paperless, ensure that the airlines have the ability to transmit the required

training does not require the presence of a CFI but only the presence of an individual qualified to act as a safety pilot or as a pilot in command of an operation in actual instrument conditions.'' *Id.*

[125] The Federal Aviation Administration (FAA) Extension, Safety, and Security Act of 2016, Public Law 114–190, Section 2307 (2016); 14 CFR 61.3(c)(2)(xiii), 61.23(a)(3), 61.101, 61.113(i). *See also* Final Rule, ''Alternative Pilot Physical Examination and Education Requirements,'' 82 FR 3149 (Jan. 11, 2017).

[126] Prior to this final rule, under § 141.5, the graduates that completed special curricula courses could not be counted when calculating the 80 percent pass rate required for issuance or renewal of a pilot school certificate.

[127] ''Pilot, Flight Instructor, Ground Instructor, and Pilot School Certification Rules; Final Rule,'' 62 FR 16220 (Apr. 4, 1997); 14 CFR 141.5(d) (1998).

[128] After the 2009 final rule and subsequent technical amendment, § 141.5(d) stated: ''Has established a pass rate of 80 percent or higher on the first attempt for all knowledge tests leading to a certificate or rating, practical tests leading to a certificate or rating, or end-of-course tests for an approved training course specified in appendix K of this part.'' ''Pilot, Flight Instructor, and Pilot School Certification'' Technical Amendment, 75 FR 56857 (Sep. 17, 2010); 14 CFR 141.5(d) (2011).

[129] In 2009, the FAA sought to clarify the ''quantity of training'' requirement in § 141.5(d) by revising and relocating it to new paragraph (e). ''Pilot, Flight Instructor, and Pilot School Certification; Final Rule,'' 74 FR 42500 (Aug. 21, 2009). As a result of the 2009 final rule, § 141.5(d) contained the ''quality of training'' requirement and § 141.5(e) contained the ''quantity of training'' requirement. The FAA explained in the preamble that the requirement that ''at least 80 percent of those persons passed their test on the first attempt is not a change from the existing rule. The purpose of this change is clarifying the intent of the rule.'' 74 FR 42500, 42538. The FAA issued a technical amendment in 2010 to clarify § 141.5(d) and to reinsert language that was inadvertently removed as a result of the 2009 final rule. 75 FR 56857. In the technical amendment, the FAA explained that it was revising the language of § 141.5(d) to clarify that in order to meet the quality of training standard for issuance or renewal of a pilot school certificate, a pilot school must achieve a combined 80 percent pass rate on the first attempt for all: (1) Knowledge tests and practical tests leading to a certificate or rating, and (2) end-of-course tests for appendix K courses. 75 FR 56857. The FAA adopted rule language, however, that appeared to be inconsistent with its intent given its use of the term ''or'' instead of ''and'' in § 141.5(d). 14 CFR 141.5(d) (2011).

[130] Legal Interpretation to Jared Testa from the Assistant Chief Counsel, Regulations Division (July 1, 2011).

[131] Prior to this final rule, regulations required a person serving as a required flightcrew member of a United States civil aircraft to have his or her airman certificate in his or her physical possession or readily accessible in the aircraft when exercising the privileges of that certificate. 14 CFR 61.3(a) and 63.3(a). The regulations also required a person serving as a required flightcrew member to have an appropriate medical certificate in his or her physical possession or readily accessible in the aircraft. 14 CFR 61.3(c) and 63.3(a).

[132] If the flightcrew member's airman or medical certificate remains unavailable after 72 hours, the flightcrew member would be required to comply with the requirements of § 61.29 or § 63.16, as applicable, and request a 60-day temporary confirmation document from the Airman Certification Branch or the Aeromedical Certification Branch until a replacement certificate is issued and in the possession of that airman.

[133] This would be in lieu of utilizing the FAA Airmen Online Services website that can provide temporary authority in the form of a fax or email. This also would apply to the temporary authority for the medical certificate provided by fax from the Aeromedical Branch.

documentation to the pilot in a timely manner, thereby reducing stress and delays without compromising safety. Similarly, NATA believed an electronic document would be suitable.

The FAA finds it unnecessary to specify in §§ 121.383(c) and 135.95(b) that the temporary verification document may be in either paper or electronic form. Sections 121.383(c) and 135.95(b) are intended to provide flexibility and allow for advancements in technology regarding the method, format or media by which the temporary document must be provided. The operations specification authorizing an approved certificate verification plan will include the specific method or format for each air carrier/operator. Accordingly, the FAA is adopting §§ 121.383(c) and 135.95(b) as proposed. The FAA will be issuing a new Advisory Circular (AC 00–70) to provide guidance to air carriers/operators on obtaining approval of a certificate verification plan, including the necessary components for various methods and formats of issuing the temporary document.

A4A supported proposed §§ 121.383(c) and 135.95(b), which would have allowed the use of temporary validation documents for flights conducted ''entirely within the United States.'' Unlike the current exemptions that limit the relief to ''operations conducted entirely within the District of Columbia and the 48 contiguous States of the United States,'' the proposed rule language would have allowed persons to use the temporary document on flights conducted entirely within Alaska, Hawaii, Puerto Rico and other possessions.

The FAA is adopting §§ 121.383(c) and 135.95(b) as proposed.[134] Article 29 of the Convention on International Civil Aviation requires that every aircraft engaged in international navigation shall carry ''the appropriate licenses for each member of the crew.'' Thus, temporary verification documents provided by the certificate holder from its records will not meet the requirements of the Convention.

One individual suggested the FAA change ''domestic operations'' to ''operations within the United States'' to avoid confusion with the term ''domestic operations'' contained in 14 CFR part 119, which defines a particular type of part 119 operation.

The term ''domestic operations'' was not proposed in regulatory text. It is therefore unnecessary to make any changes to the proposed rule language in response to the individual's comment. The FAA notes, however, that this term was used in Tables 1 and 3 of the NPRM,[135] which summarized the proposed provisions. To avoid any confusion, the FAA is not using the term ''domestic operations'' in this final rule document.

AOPA suggested a correction to proposed § 63.3(a)(2), which would have mistakenly referenced § 63.16(d) instead of § 63.16(f).

Section 63.3(a)(2) now references new § 63.16(f), as AOPA suggested because the requirements that were previously contained in § 63.16(d) have been relocated to new § 63.16(f) and revised.

One individual asked several clarifying questions regarding limitations on the use of temporary validation documents. This individual asked how the program would keep track of the number of times a flightcrew member loses, destroys, or otherwise fails to have their certificates in their possession. This individual also asked if there was a limit to the number of temporary verification documents issued to an individual, and if so, how those limitations would be enforced.

Keeping track of how many times a crewmember loses their pilot or medical certificate, or any limitations regarding the number of times a temporary verification document can be issued to any one individual, can be managed appropriately with FAA air carrier oversight. In addition, conditions and limitations can be specified in an air carrier's certificate verification plan, within its operation specifications.

RACCA and Bemidji Aviation Services, Inc. suggested incorporating similar allowances for aircraft registration and airworthiness certificates.

These comments are outside the scope of this rulemaking. The proposal was specific to certificates that an airman must have in his or her possession to exercise his or her privileges. Unlike airmen certificates that are carried on a person outside of the aircraft, the airworthiness and registration certificates are typically placed in a permanent location within the aircraft (usually visible to the operator) and are rarely removed from the aircraft.[136]

AOPA recommended the FAA implement an online method to allow all pilots and airmen to request and obtain a temporary document confirming medical certification. This comment is also outside the scope of this rulemaking. The FAA notes, however, that it is addressing AOPA's comment in a separate action.[137]

The FAA is amending §§ 121.383(c) and 135.95 as proposed. Furthermore, as a result of the FAA's own continued review of the proposal, the FAA has decided to also allow part 91, subpart K, program managers to issue temporary verification documents to flightcrew members who do not have their airman or medical certificates in their personal possession for a particular flight. The FAA did not originally consider providing relief to part 91, subpart K, program managers only because there were no current exemptions granted to these program managers. However, upon further review, the FAA finds that it is appropriate to include part 91, subpart K, program managers because of the similarity of part 91, subpart K, operations compared to part 121 and 135 operations. Many similarities exist between part 91, subpart K, program managers and part 135 operators providing public air transportation, such as: Time, duty, and rest requirements, destination airport analysis programs, minimum equipment lists, recordkeeping, pilot training and checking, proving tests, approved inspection programs, and drug and alcohol misuse and prevention programs. In some instances, a part 91, subpart K, program manager is also certificated under part 119 to conduct part 135 operations.

Specifically, part 91, subpart K, fractional ownership programs are subject to FAA oversight similar to that provided to air carriers (parts 135 and 121), with the exception of line checks and en-route inspections. FAA aviation safety inspectors conduct scheduled and unscheduled inspections, and surveillance of personnel, aircraft, records, and other documents to ensure compliance with the regulations. Given the similarities between parts 91, subpart K, 121 and 135, the FAA finds it appropriate to also prevent cancelation of flights under part 91, subpart K, in situations where a pilot certificate or medical certificate is valid

[134] In accordance with § 1.1 ''United States, in a geographical sense, means (1) the States, the District of Columbia, Puerto Rico, and the possessions, including the territorial waters, and (2) the airspace of those areas.''

[135] 81 FR at 29722 and 29748.

[136] The FAA also notes that Article 29 of the Convention on International Civil Aviation requires that every aircraft of a contracting State, engaged in international navigation, shall carry in the aircraft several documents, including its certificate of registration, its certificate of airworthiness, and the appropriate licenses for each member of the crew. Because temporary verification documents would not meet the requirements of the Convention, the FAA is only allowing the use of temporary verification documents on flights conducted entirely within the United States.

[137] Aerospace Medicine Safety Information System (AMSIS) will permit user(s) to print a valid medical certificate. AMSIS is still in development and is anticipated to become available in 2020.

but not physically available. Therefore, consistent with the amendments to §§ 121.383 and 135.95, the FAA is revising § 91.1015 by adding new paragraph (h), which will allow a program manager to obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the program manager's management specifications. Consistent with the NPRM, the temporary verification document will remain a short-term solution for a period not to exceed 72 hours. The FAA is also revising § 61.3(a)(1) by adding new paragraph (vi) to permit flightcrew members to carry temporary documents provided by a program manager only on flights conducted for the program manager under part 91, subpart K.[138] This is consistent with the NPRM, which proposed to add new § 61.3(a)(1)(v) to allow flightcrew members to carry documents provided by a certificate holder only on flights conducted for the part 119 certificate holder, including ferry flights to reposition aircraft. The FAA notes that it is adopting § 61.3(a)(1)(v) as proposed. The FAA is also adopting the proposed revisions to current § 61.3(a)(1)(iv).

Furthermore, as a result of the FAA's continued review of the proposal, the FAA is making several clarifying changes to allow for smooth implementation of the final rule. Because the final rule allows a person to use a temporary verification document as an airman certificate or medical certificate, if certain conditions are met, the inspection requirements of §§ 61.3(l), 63.3(e), and 121.383(b) would have applied to the temporary document. However, to avoid any confusion, the FAA is revising §§ 61.3(l), 63.3(e), and 121.383(b) to expressly include the temporary verification document in the list of documents that must be presented for inspection upon request from the Administrator.

Additionally, the FAA is revising § 121.383(a) to clarify that an airman engaged in part 121 operations must have in his or her possession any required appropriate current airman and medical certificates or a temporary verification document issued in accordance with an approved certificate verification plan under new § 121.383(c).[139] This change from what was proposed is consistent with the FAA's proposal to add new § 61.3(a)(1)(v) to allow a person engaged in flight operations within the United States for a part 119 certificate holder authorized to conduct operations under part 121, to hold a temporary verification document in place of an airman or medical certificate. The FAA will be issuing a new Advisory Circular to provide guidance to certificate holders/program managers on obtaining approval of a certificate verification plan. The FAA will continue to provide relief through exemptions until June 27, 2019 to allow sufficient time for certificate holders to obtain authority under the regulation from their Principal Operations Inspector.

I. Military Competence for Flight Instructors

In the NPRM, the FAA proposed several changes to §§ 61.197 and 61.199 to accommodate renewal and reinstatement of flight instructor certificates by military instructors and examiners.[140] In § 61.197(a)(2)(iv), the FAA proposed to expand the 12-calendar-month timeframe to 24 calendar months. The FAA also proposed to clarify in § 61.197(a)(2)(iv) that a flight instructor would be able to renew his or her certificate by providing a record demonstrating that, within the previous 24 calendar months, the instructor passed a military instructor pilot proficiency check for a rating that the instructor already holds or for a new rating.

In § 61.199, the FAA proposed to revise paragraph (a) to permit a military instructor pilot to reinstate his or her expired flight instructor certificate by providing a record showing that, within the previous six calendar months, the instructor pilot passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check for an additional military rating.[141] Additionally, the FAA proposed to add a new § 61.199(c) as a temporary provision, which would have allowed military instructor pilots who obtained their initial flight instructor certificate under subpart H to reinstate that instructor certificate based on military competence rather than by completing a practical test.

The FAA received six comments on these proposed amendments. Three commenters supported the proposal. Two commenters recommended changes to the proposed rule language. One commenter opposed the proposal.

The Society of Aviation and Flight Educators (SAFE) and Aircraft Owners and Pilots Association (AOPA) concurred with the proposed amendments to § 61.199. AOPA also supported the proposed changes to § 61.197. One individual, identifying himself as a retired U.S. Air Force instructor, supported having military credentials recognized by the FAA and providing civilian equivalent instructor ratings.

One individual, identifying as a military instructor with the National Guard Bureau, agreed with changing the timeframe in § 61.197(a)(2)(iv) from 12 calendar months to 24 calendar months. However, the commenter suggested that the FAA revise the proposed rule language to require a record showing that, within the preceding 24 months from the month of application, the flight instructor passed an official U.S. Armed Forces military instructor pilot proficiency check equivalent to renewal requirements as stated in the practical test standards (PTS) for the rating sought. The commenter believed that this would validate an equivalent level of flight proficiency. The commenter explained that because some U.S. Armed Forces have instructors that only train specific tasks such as formation flying or tactical operations, this type of instruction is not an equivalent level of flight proficiency as required for the renewal of a FAA flight instructor certificate. The commenter also provided attachments described as comparable military instructor pilot proficiency checks accomplished on an annual basis in the U.S. Army. The commenter asserted that these annual checks are equivalent to or better than what would be necessary for the renewal of a flight instructor rating.

As stated in the NPRM, the FAA proposed to clarify in § 61.197(a)(2)(iv) that a flight instructor may renew his or her certificate by providing a record demonstrating that, within the previous

[138] The FAA proposed to redesignate current § 61.3(a)(1)(v) as new § 61.3(a)(1)(vi). Now that the FAA is adding new § 61.3(a)(1)(vi) to extend the relief to part 91, subpart K operators, this final rule redesignates current § 61.3(a)(1)(v) as new § 61.3(a)(1)(vii).

[139] In this final rule, the FAA is adding § 121.383(c) to allow a certificate holder to obtain approval to provide a temporary document verifying a flightcrew memberr's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications.

[140] Prior to this final rule, a person renewing his or her flight instructor certificate under § 61.197(a)(2)(iv) was required to submit a record showing that, within the preceding 12 calendar months, the flight instructor passed an official U.S. Armed Forces military instructor pilot proficiency check. Section 61.199 required the holder of an expired flight instructor certificate to reinstate that certificate by passing a practical test.

[141] As explained in the NPRM, the FAA has accepted a flight instructor or examiner proficiency check conducted by the military to be equivalent to an FAA practical test for the purposes of issuing initial flight instructor certificates, adding ratings to existing flight instructor certificates, and renewing flight instructor certificates.

24 calendar months, the instructor passed a ''U.S. Armed Forces military instructor pilot proficiency check'' for a rating that the instructor already holds or for a new rating. As explained in the NPRM, the FAA has accepted a flight instructor or examiner proficiency check conducted by the military to be equivalent to an FAA practical test for the purposes of issuing initial flight instructor certificates and adding ratings to existing flight instructor certificates.[142] Upon further reflection, the FAA finds that the renewal requirements of § 61.197(a)(2)(iv) should be consistent with § 61.73(g), which allows a person to apply for and be issued an initial flight instructor certificate based on official U.S. military documentation of being a U.S. military instructor pilot or U.S. military pilot examiner. Therefore, the FAA is revising proposed § 61.197(a)(2)(iv) to allow renewal based on either ''an official U.S. Armed Forces military instructor pilot or pilot examiner proficiency check.''

However, the FAA disagrees with referencing the PTS within § 61.197(a)(2)(iv) because it would be too prescriptive. The military typically does not perform all the tasks from the PTS or Airman Certification Standards (ACS), as appropriate, required for civil pilot certification during their military instructor pilot proficiency checks. Rather, the military typically performs tasks or maneuvers that are not outlined in the PTS and/or ACS. The FAA believes that requiring a record showing that, within the preceding 24 months from the month of application, the flight instructor passed an official U.S. Armed Forces military instructor pilot proficiency check in an aircraft for which the military instructor already holds a rating or in an aircraft for an additional rating, is sufficient to validate a flight instructor's equivalent level of competency. The FAA has long recognized and accepted military credit without further review.

The individual commenter further asserted that if a military proficiency check meets the requirements for flight instructor renewal or reinstatement as described in the PTS and/or ACS, the FAA should modify § 61.73(g)(3)(iv) to read: ''An official U.S. Armed Forces record or order that shows the person passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check in an aircraft as a military instructor pilot or pilot examiner that is appropriate to the flight instructor rating sought that meets equivalent requirements of 14 CFR 61.185.''

[142] 81 FR at 29740.

Section 61.73(g)(3)(i) already requires the applicant to present a knowledge test report that shows the person passed a knowledge test on the aeronautical knowledge areas listed under § 61.185(a). Therefore, the FAA finds it unnecessary to revise § 61.73(g)(3)(iv) to require the U.S. Armed Forces proficiency check to meet requirements of § 61.185.

This commenter also recommended the FAA revise proposed § 61.199(a)(3), which would have required a military instructor to show, within the preceding 6 calendar months from the date of application for reinstatement, the person passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check for an additional military instructor rating. The commenter noted that additional military ratings are not acquired through a ''proficiency check.'' The commenter, therefore, recommended the FAA revise paragraph (a)(3) to require a record showing that, within the previous six calendar months, the instructor passed a U.S. Armed Forces instructor pilot or pilot examiner qualification program for an additional military rating that results in an additional rating to be added to the airman certificate. The individual also recommended the FAA add a new paragraph (a)(4) that would allow for reinstatement of a flight instructor certificate if the instructor can provide a record showing that, within the previous six calendar months, the instructor passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check equivalent to reinstatement requirements as stated in the PTS and/or ACS for the rating sought. The commenter explained this provision would facilitate reinstatement of an expired flight instructor certificate through a U.S. Armed Forces proficiency check that would be equivalent to the flight test described in the PTS.

As the commenter pointed out, additional military ratings are not acquired through a proficiency check. Therefore, the FAA is revising proposed § 61.199(a)(3) to more accurately reflect the process by which a military instructor pilot acquires an additional aircraft rating qualification. The FAA is also dividing proposed § 61.199(a)(3) into two subparagraphs to make the reinstatement requirements for a military instructor pilot more consistent with the reinstatement requirements for a civilian holder of an expired flight instructor certificate, which are found in § 61.199(a)(1) and (2).

Accordingly, § 61.199(a)(3)(i) now allows reinstatement of an expired flight instructor certificate if the military instructor pilot can provide a record showing that, within the preceding 6 calendar months from the date of application for reinstatement, the pilot passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check. The FAA finds that a U.S. Armed Forces instructor pilot or pilot examiner proficiency check is the military equivalent of a flight instructor certification practical test. Therefore, this requirement is consistent with § 61.199(a)(1), which allows reinstatement of an expired flight instructor certificate if the civilian pilot satisfactorily completes a flight instructor practical test for one of the ratings held on the expired flight instructor certificate.

Additionally, § 61.199(a)(3)(ii) now allows reinstatement of an expired flight instructor certificate if the military instructor pilot can provide a record showing that, within the preceding 6 calendar months from the date of application for reinstatement, the pilot completed a U.S. Armed Forces instructor pilot or pilot examiner training course and received an additional aircraft rating qualification as a military instructor pilot or pilot examiner that is appropriate to the flight instructor rating sought. The FAA finds that this requirement accurately reflects the process by which a military instructor pilot acquires an additional aircraft rating. The FAA is not using the terminology ''qualification program,'' as the commenter recommended, because it is subject to interpretation. Instead, the FAA is using language that is consistent with the terminology of § 61.73(g)(3)(iii).[143] The FAA notes that new § 61.199(a)(3)(ii) is consistent with § 61.199(a)(2), which allows a civilian holder of an expired flight instructor certificate to reinstate that flight instructor certificate by satisfactorily completing a flight instructor certification practical test for an additional rating.

One individual asserted that military instructor pilots who allow their FAA flight instructor rating to expire reflect a lack of knowledge concerning 14 CFR part 61 that is pervasive in the military.

The FAA disagrees. There are many possible scenarios other than ''a lack of knowledge'' that may lead to someone letting his or her flight instructor

[143] To be issued a flight instructor certificate with the appropriate ratings, § 61.73(g) requires, in part, that the person present an official U.S. Armed Forces record or order that shows the person completed a U.S. Armed Forces' instructor pilot or pilot examiner training course and received an aircraft rating qualification as a military instructor pilot or pilot examiner that is appropriate to the flight instructor rating sought. 14 CFR 61.73(g)(3)(iii).

certificate expire. In some instances, it may be intentional or an individual may be subject to events beyond his or her control. As such, the commenter's assertion is speculative. The FAA has determined that this provision will provide an equitable method of renewal or reinstatement for a FAA flight instructor certificate similar to the allowances currently described in § 61.199(a)(1) and (2).[144]

One individual recommended the FAA revise § 61.73 to add military navigators and naval flight officers who hold a FAA flight instructor certificate and who are military flight instructors to the list of persons eligible for an instrument flight instructor certificate. This commenter further asserted that there are numerous other military aeronautical specialties beyond pilots, navigators, and naval flight officers who have a skill set that may be valuable to the civilian aviation community. The commenter recommended that any military member that can produce documentation of service instructing any aviation crew position be exempted from the fundamentals of instruction written examination for a flight instructor certificate in § 61.183(e) or for a ground instructor certificate in § 61.213(b).

The FAA is not adopting these recommendations because they are outside the scope of this rulemaking. Furthermore, the FAA disagrees with providing flight instructor equivalency for non-pilot instructor positions.

The FAA is adding new § 61.199(c) as proposed. As previously stated, § 61.199(c) will allow military instructor pilots who obtained their initial flight instructor certificate under subpart H to reinstate that flight instructor certificate based on military competence rather than by completing a practical test. The FAA notes that § 61.199(c) is a temporary provision that will expire on August 26, 2019. The FAA will revise FAA Order 8900.1 to provide guidance to designees and inspectors on how to facilitate instructor military competency approvals.

J. Use of Aircraft Certificated in the Restricted Category for Pilot Flight Training and Checking

Section 91.313(a) prohibits a person from operating a restricted category aircraft for other than the special purpose for which it is certificated or in any operation other than one necessary to accomplish the work activity directly associated with the special purpose. Under § 91.313(b), operating a restricted category civil aircraft to provide flight crewmember training in a special purpose operation for which the aircraft is certificated is an operation for that special purpose. The FAA recently clarified, however, that flight training and testing for certification (*e.g.,* for type ratings) in restricted category aircraft is not a special purpose operation under § 91.313.[145] As such, these activities cannot be conducted in a restricted category aircraft.

1. Flights Necessary To Accomplish Work Activity Directly Associated With the Special Purpose

In the NPRM, the FAA proposed in § 91.313(b) to list the following operations in restricted category aircraft as flights necessary to accomplish the work activity directly associated with a special purpose operation:

- Flights conducted for flight crewmember training in a special purpose operation for which the aircraft is certificated provided the flight crewmember holds the appropriate category, class, and type ratings and is employed by the operator to perform the appropriate special purpose operation;
- Flights conducted to satisfy proficiency check and recent flight experience requirements under part 61 of this chapter provided the flight crewmember holds the appropriate category, class, and type ratings and is employed by the operator to perform the appropriate special purpose operation; and
- Flights conducted to relocate a restricted category aircraft for maintenance.

A number of commenters, including Queen Bee Air Specialties, Inc., GAMA, Air Tractor, and the National Agricultural Aviation Association (NAAA), noted that the proposed regulation would prohibit third-party training providers from conducting flight crewmember training in a special purpose operation. The commenters indicated that such a provision would eliminate agricultural aviation schools and decrease safety. The commenters noted that training by experienced instructors based on an approved curriculum in restricted category aircraft under the oversight of FAA inspectors enhances safety. The NAAA and the Colorado Agricultural Aviation Association (CAAA) commented that they interpreted the proposal to allow agricultural aviation operator ''sponsored'' pilots to be able to attend third party training facilities.

GAMA, NAAA, AOPA, and CAAA suggested revisions to proposed § 91.313(b) to ensure that training which is directly associated with the special purpose operation is permitted without an employment relationship existing between the trainee and the special purpose operator.[146]

Upon review of the extensive comments received, including a conference call with Air Force representatives on December 13, 2016, and a face-to-face meeting with representatives from the agricultural aviation industry during the comment period, the FAA agrees that the proposed rule language would have unnecessarily required all personnel receiving flight crewmember training in a special purpose operation to be employed by the operator providing the training.[147]

Flight crewmember training in a special purpose operation has historically been conducted by flight schools. Appendix K of part 141 for pilot schools contains allowances for special curriculum courses for agricultural and external load operations. The FAA did not intend to end the longstanding practice of pilot schools conducting flight crewmember training in a special purpose operation. Flight crewmember training in a special purpose operation for which the aircraft is certificated is currently authorized in accordance with § 91.313(b) and was not intended to be affected by this provision. It was the FAA's intent only to require pilot candidates to be an employee of the operator when accomplishing training or practical tests specific to the requisite type rating, a proficiency check, or recent flight experience requirements specified under part 61. The FAA has revised the language proposed in the NPRM to remove the employee requirement for

[144] (1) A flight instructor certification practical test, as prescribed by § 61.183(h), for one of the ratings held on the expired flight instructor certificate.

(2) A flight instructor certification practical test for an additional rating.

[145] Several operators hold exemptions that permit them to conduct pilot training for certification, practical tests (for type rating designations) in aircraft certificated in the restricted category.

[146] GAMA, Air Tractor, NAAA and Colorado Agricultural Aviation Association all cited a recent survey conducted by the NAAA which found that operators who conduct agricultural operations have an average of 2.1 aircraft per operation, and that there was an average of 2.0 pilots per operation. Texas State Technical College, GAMA, NAAA, Farm Air, Curless Flying Service and Colorado Agricultural Aviation Association all noted that many of these small operators do not have capacity to dedicate an aircraft to training. NAAA, Farm Air, Curless Flying Service, Colorado Agricultural Aviation Association and Queen Bee Air Specialties specifically discussed the difficulty of maintaining a turbine aircraft and commented that most operators rely on third party training providers to provide instruction in a dual cockpit aircraft.

[147] A record of conversation was placed in the docket for each of these meetings.

flight crewmember training in a special purpose operation.

The FAA is retaining the provision proposed in § 91.313(b) that allows pilots employed by operators performing special purpose operations to accomplish § 61.58 proficiency checks and recent flight experience requirements set forth in § 61.57 in the course of their employment provided the pilots hold the appropriate category, class, and type ratings. When a pilot is employed to perform a special purpose operation, satisfying recent flight experience and proficiency check requirements is necessary to accomplish the work activity directly associated with a special purpose operation. When a pilot is not employed to perform a special purpose operation, these operations are neither a special purpose operation nor an operation directly associated with a special purpose operation and, therefore, are not permitted under § 91.313(a).

The FAA is also retaining the provision from the NPRM that adds relocation flights for maintenance to the list of operations considered necessary to accomplish the work activity directly associated with the special purpose operation.

GAMA, Air Tractor, NAAA, Thrush Aircraft, Inc. and CAAA all noted that the FAA's proposal to add this provision could suggest that other essential types of flights necessary to accomplish work directly associated with the special purpose, such as positioning flights, flights to deliver aircraft, and flights to trade shows, are excluded from expressly listed operations. GAMA stated that these flights are clearly within the scope of flights necessary to accomplish work directly associated with the special purpose, but that the industry could benefit from explicit recognition that § 91.313(b) does not contain an exhaustive list of flights.

The FAA has modified the final rule text to include flights to relocate a restricted category aircraft for delivery, repositioning, or maintenance to be considered as flights necessary to accomplish work activity directly associated with a special purpose operation. This change in the final rule permits many of the operations described by the commenters, such as deliveries from an aircraft manufacturer, change in ownership deliveries, relocation from one special purpose operation to another, or repositioning for the special purpose operation. The FAA notes that other types of flight events not expressly allowed by the regulation may be permitted if they are necessary to accomplish work activity directly associated with the special purpose operation.[148] Any operation that does not meet this standard would require an exemption from the regulation.

2. LODAs for Training and Testing for Certification

In the NPRM, the FAA proposed in § 91.313(h) to allow operators of restricted category aircraft to apply for deviation authority for the purpose of conducting the following operations in restricted category aircraft:

- Flight training and the practical test for issuance of a type rating provided the pilot being trained and tested holds at least a commercial pilot certificate with the appropriate category and class ratings for the aircraft type and is employed by the operator to perform a special purpose operation; and
- Flights to designate an examiner or qualify an FAA inspector in the aircraft type and flights necessary to provide continuing oversight and evaluation of an examiner.

The FAA emphasized that the proposed provision was intended to ensure that operators do not establish training schools for the sole purpose of issuing type ratings using restricted category aircraft. As proposed, operators would only be granted deviation authority under proposed § 91.313(h) to conduct this training and testing for pilots who are employed by the operator and only when a type rating is required to complete the special purpose operation for which the aircraft was certificated and the operator is actively engaged in performing.

A number of commenters opposed the proposed provision in § 91.313(h) that limited the ability to obtain a LODA to an employer providing flight training to its employees who perform a special purpose operation for that employer. Texas State Technical College, GAMA, L–3 Communications, and Queen Bee all suggested that such a limitation would result in a reduction in safety.

More specifically, Thrush Aircraft, Inc. noted that the implication of the phrase ''is employed by the operator'' in proposed § 91.313(h)(1)(i) is that an employer/employee relationship must exist before any training may commence. The interpretation of this phrase could create the effect of ''restricting'' the aircraft from being used in agricultural aviation flight schools to conduct training of students planning to become agricultural pilots, by instructors employed by manufacturers and their dealers, or flight schools to perform pilot checkouts and transitional training, such as transitions from piston powered to turbine powered aircraft and by third party training for firefighting or other restricted category operations. The U.S. Air Force commented that proposed § 91.313(h) would prohibit commercial vendors from providing the required USAF flight crewmember training; therefore, USAF flightcrew would not be able to receive training in restricted category aircraft. The USAF also indicated that removing the employment requirement would allow training in aircraft where it is not practical to obtain a type rating in an aircraft with a standard airworthiness certificate. Queen Bee stated that the proposal limits ability for dealers to provide training that is crucial to customers for their safety, success and comfort.

As noted previously, the FAA has removed the proposed employment requirement for flight crewmember training in a special purpose operation. Third party training providers may continue to provide training in special purpose operations (*e.g.* firefighting, agricultural operations, and aerial advertising) absent an employment relationship provided the operation is a special purpose operation for which the aircraft is certificated.[149] The LODA and employment requirements described in § 91.319(h)(1)(i) is specific to training and testing to obtain a type rating and does not impede the special purpose flight training identified by Thrush, the USAF, and Queen Bee.

GAMA, L–3 Communications, and AOPA all suggested that the FAA revise the proposal to permit individuals or entities (instead of operators) to apply for deviation authority and require that the trainee is employed by ''an'' operator to perform a special purpose operation instead of ''the'' operator applying to conduct the training in proposed § 91.313(h)(1). They noted that this would help to ensure that the type rating training is required for the special purpose operation in which the operator is actively engaged but allow flexibility if the operator is unable to conduct the training itself. GAMA noted, however, that this provision still would hinder training of pilots trying to enter the

[148] In the 1965 final rule, the FAA provided examples of operations necessary to accomplish the work activity directly associated with the special purpose operation which included allowing a farmer to conduct a flight for the purpose of showing which fields should be dusted or transportation of an insurance agent, surveyor, or inspector to the site of a special purpose operation. The FAA would also consider a flight conducted to relocate an aircraft to an area of a special purpose operation to be an operation necessary to accomplish the special purpose operation.

[149] 14 CFR 21.25(b).

industry and not yet employed by a special purpose operator.

L–3 Communications noted that modifying the proposal so that other entities could obtain a LODA would allow training of initial cadres of pilots by an aircraft manufacturer or by a properly certified training school with an authorization to conduct restricted category training. L–3 Communications noted that such a change would still achieve the FAA's goal of limiting the training in restricted category aircraft for certification to only those pilots who are employed to perform a special purpose operation.

GAMA, Air Tractor, Queen Bee, and one individual generally noted that limiting the training and testing for the purpose of achieving a type rating in a restricted category aircraft to a pilot's employer will deny access to training for pilots that are not currently employed in a special purpose operation. Additionally, Air Tractor noted the possible burden on students, who must stay employed to finish flight training. GAMA also noted that some insurance underwriters may require pilots to obtain training that is only available through third party training providers. Air Tractor, NAAA, CAAA, Queen Bee and one individual all noted that these types of barriers to training will affect the ability to replace an aging pilot community.

As noted in the NPRM, the FAA has historically placed operating limitations on the use of restricted category aircraft because the airworthiness certification standards for these aircraft are not designed to provide the same level of safety that is required for aircraft certificated in the standard category. The operating limitations set forth in § 91.313 are designed to compensate for the different standards and provide the necessary level of safety for special purpose operations. In the final rule, the FAA has retained the employment requirement to prevent flight training and testing for the purpose of obtaining a type rating in restricted category aircraft without an explicit employment connection to special purpose operations. The operation of restricted category aircraft has always been limited to special purpose operations and those operations necessary to accomplish the work activity directly associated with a special purpose operation. Providing flight training and testing for certification to a pilot who does not perform a special purpose operation is not training in a special purpose operation and the hope of eventual employment in a special purpose operation is too attenuated to be necessary to accomplish the work activity associated with a special purpose operation.

3. Economic Burden

L–3 Communications, Air Tractor, NAAA, CAAA, and Queen Bee generally noted that the proposed rule would have a significant adverse effect on businesses conducting operations with restricted category aircraft since nearly all of these businesses are small businesses. Texas State Technical College, L–3 Communications, Air Tractor, NAAA and CAAA all noted that limiting the training and testing of pilots for the purpose of achieving a type rating in a restricted category aircraft to owners/operators will result in a major financial burden to certain entities. GAMA, L–3 Communications, Air Tractor, Inc., and Queen Bee Air Specialties generally noted that many agricultural aviation operators lack the staff and aircraft to conduct training for their employees. Texas State Technical College and GAMA both noted that many of these small operators do not have in-house training staff. Texas State specifically noted that the cost of providing its own training would be a huge burden. Air Tractor commented that the FAA should not place more burdens on these operators and reduce safety by requiring training in restricted aircraft to be conducted by the operator and requiring the student to be an employee of the operator.

Most of the commenters concerned with the employment requirement have described training operations in which restricted category aircraft are being used for flightcrew member training in a special purpose operation rather than flight training to obtain a type rating. The FAA has removed the proposed employment requirement for special purpose training in the final rule which may continue to be conducted without obtaining a LODA and without an employment relationship. As such, the economic burden associated with this provision would only affect operators who must obtain a LODA to conduct flight training for certification. These are very limited training operations, and they are currently conducted by operators using the exemption process. The FAA has issued several exemptions to facilitate this training.[150] In all cases, the FAA has required the training to be accomplished by the employer as a condition of the exemption. If anything the provision will be relieving in nature to both operators and the FAA by eliminating the need for the exemption process. As discussed in the NPRM, the provision is not intended to allow operators to establish training schools utilizing restricted category aircraft for the purpose of issuing type ratings.

Queen Bee specifically noted that this provision would limit its ability to vet pilots for operators that do not have two-place, dual control aircraft and/or the expertise in training. Queen Bee indicated it currently provides this training, which would be prohibited under the proposed requirements, for the U.S. company ARAMCO which responds to oil spills in the Red Sea with U.S. citizens as pilots.

L–3 Communications, Air Tractor, NAAA, Farm Air, Curless Flying Service and CAAA noted the effect on manufacturers developing and selling new restricted category type designs. L–3 Communications, Farm Air and Curless Flying Service asserted that the proposed rule would limit the ability of manufacturers to develop and sell new restricted category type design aircraft. According to the commenters, prospective buyers of new restricted category aircraft would not be able to receive training for their pilot employees. A manufacturer would have no incentive to produce a new design aircraft providing safety benefits and improvements based on new design features and technology insertion because pilot employees of a prospective buyer could not receive training.

Most restricted category aircraft do not require a type rating and would be unaffected by this provision. Additionally, a manufacturer of a new large or turbojet powered aircraft could seek approval as a standard or transport category aircraft and, therefore, avoid any such ''type rating'' training limitations. The FAA notes that the level of safety for restricted category aircraft may be lower than the level of safety for standard category aircraft. However, the restricted category level of certification does not eliminate any type certification procedural requirements, such as the need to comply with continued airworthiness requirements. To maintain an equivalent level of safety for the public the FAA imposes certain operating restrictions for restricted category aircraft. This provision is specific to facilitate training in restricted category aircraft requiring a type rating safely, not the promotion of restricted category aircraft production for public use.

[150] Aero Contractors Ltd., Exemption No. 14396; Alaska Air Fuel, Inc., Exemption No. 14205; Sky Aviation Corporation, Exemption No. 12449; Columbia Helicopters, Exemption No. 11506; Airborne Support, Inc., Exemption No. 11470; Withrotor Aviation, Inc., Exemption No. 11427; CHI Aviation, Exemption No. 11383; Aero-Flite, Inc., Exemption No. 11276; Billings Flight Service, Exemption No. 11383.

4. Operations for Compensation or Hire

The FAA also proposed a change to § 91.313(c) to ensure that instructors providing flight training and designees conducting practical tests under a LODA may accept compensation for these operations. Likewise, the FAA proposed to revise § 91.313(d) to permit persons to be carried on restricted category aircraft if necessary to accomplish a flight authorized by LODA under paragraph (h).

AOPA suggested revisions to § 91.313(c) to eliminate confusion by breaking each of the operations identified into three separate subparagraphs and provided specific revised rule language. The FAA is retaining the language in paragraph (c) as it was proposed in the NPRM. The FAA merely proposed to add operations conducted under a LODA to the existing list of operations involving the carriage of persons and material that could be conducted without violating the general rule prohibiting the carriage of persons or property on restricted category aircraft for compensation or hire.

5. Exemptions

GAMA raised concerns about the relationship between § 61.31 and proposed § 91.313(h). GAMA noted that, if applicants requesting exemption from § 61.31 type rating requirements also must request exemption from § 91.313 type rating training through this LODA process, they will be subject to an employment requirement. GAMA suggested that the FAA clarify that aircraft operators who hold exemptions from a type rating requirement do not need to also request exemption from § 91.313(h) per the proposed LODA process or revise the LODA process to permit third party training as discussed previously.

GAMA also noted that while the LODA process seems to provide a path for training in restricted category aircraft in pursuit of a type rating, they believe that this process will be burdensome to obtain and maintain. This process will be a barrier to a small business in that manufacturers that plan on building larger restricted category aircraft, that may not be exempted from the type rating requirement of § 61.31, will have a more difficult time getting training for pilots. Air Tractor added that it and its competitor Thrush Aircraft, Inc. manufacture airplanes that, by definition, are ''large'' (greater than 12,500 lbs. gross weight). These airplanes are operated under exemptions from § 61.31. Air Tractor requested that the FAA consider clarifying that large aircraft that are exempt from § 61.31 are also exempt from the LODA process as proposed in the new § 91.313(h).

Section 91.313 requires an operator to obtain a LODA to conduct training and testing for the purpose of obtaining a type rating in a restricted category aircraft. To the extent that some operators may hold exemptions that enable pilots to operate certain aircraft as PIC without a type rating, then § 91.313 would be inapplicable. We note, however, that the general provision limiting the operation of restricted category aircraft to special purpose operations and flights necessary to accomplish the work activity directly associated with a special purpose operation remains applicable to all operations conducted—even operations conducted under these exemptions. No operator should utilize a restricted category aircraft outside the permitted operations in § 91.313.

6. FAA Interpretation of § 91.313

Finally, AOPA commented that, for the last 50 years, operators of restricted category aircraft have been permitted to use such aircraft for type rating training, type rating practical tests, and PIC proficiency checks per §§ 61.31 and 61.58. AOPA suggested that the FAA reversed long-standing precedent in 2015 when it concluded that this type rating training was not permissible under § 91.313. AOPA noted that new FAA guidance for conducting pilot training and/or certification events in a restricted category aircraft was then outlined in Notice N 8900.295 which stated that flights necessary for PICs to obtain type rating designations in the restricted category aircraft required under § 61.31(a) are not permitted by the operating limitations in § 91.313.[151] AOPA stated that none of the FAA's documentation provides sufficient explanation as to the reason for the recent change in interpretation of current § 91.313(b). AOPA commented that the FAA is now proposing to codify this new interpretation and implement a LODA process. AOPA added that conducting type rating training and practical tests in restricted category aircraft under certain circumstances and without a LODA has been an accepted practice for at least several decades.

AOPA recommended that the FAA incorporate the operations from proposed § 91.313(h)(1) into proposed § 91.313(b). This approach would permit, without having to obtain a LODA, flight operations in restricted category aircraft which are necessary for PICs to obtain type rating designations in that aircraft, as required under § 61.31(a). AOPA did not believe that the LODA approach adds any increased level of safety because the FAA has not articulated any reason for the recent reinterpretation of current § 91.313. AOPA also believed that the FAA has not explained why the past accepted practice should not be codified.

The FAA Office of the Chief Counsel was asked by the Director of the Flight Standards Service to provide a legal interpretation on the scope of § 91.313 and whether the regulation permitted operators to conduct training and testing for certification in restricted category aircraft. The Office of the Chief Counsel concluded that the rule as written does not expressly permit this training and testing. As previously noted, the FAA has historically placed limitations on the use of restricted category aircraft because they do not meet the same standard as a standard category aircraft. When restricted category aircraft are used solely for the purpose of providing a type rating to a pilot who is not engaged in a special purpose operation, the operation cannot meet the express requirements of § 91.313(a). The previous history relative to this type of training does not change the identified training limitation. Additionally, the FAA believes that this type rating training and testing needs FAA oversight and approval to ensure safe operations. Restricted category aircraft were never intended or designed to be used for FAA pilot training and certification. The FAA will retain the requirement for an operator to obtain an LODA specific to training and testing in restricted category aircraft that require a type rating when a standard category aircraft is not readily available or does not exist and only when a pilot will be performing a special purpose operation.

AOPA noted that the FAA proposed to implement the changes to § 91.313 within 180 days of the final rule. AOPA further noted that if all of its recommendations are adopted, the implementation time frame should be reduced to 30 days. AOPA suggested that the proposed changes would be less complex to implement because the LODA process is eliminated and less coordination within the FAA is required.

The FAA is not eliminating the LODA process and will retain the 180-day effective date after publication. This will allow the FAA and operators time to become familiar with the guidance and process documents associated with the LODA requirements. The FAA has

[151] N 8900.295 *Pilot Training and/or Certification Events Conducted in Restricted Category Aircraft* became effective 05/05/2015.

retained the provision as proposed in the NPRM.

K. Single Pilot Operations of Former Military Airplanes and Other Airplanes With Special Airworthiness Certificates

In the NPRM, the FAA proposed to revise § 91.531 to allow large airplanes, including former military aircraft and some experimental aircraft, to operate without an SIC if they were originally designed for single pilot operations.[152] The FAA also proposed to reorganize § 91.531 by placing all affirmative requirements in paragraph (a) and all exceptions thereto in paragraph (b).[153]

The Aircraft Owners and Pilots Association (AOPA) expressed concern that, if read in isolation, proposed § 91.531(b) could be interpreted as providing an exhaustive list of airplanes that may be operated without a SIC. AOPA stated that this would be a detrimental unintended consequence because airplanes type certificated for one required pilot are not listed in proposed § 91.531(b). AOPA recommended the FAA clarify that proposed § 91.531(b) is not an exhaustive list.

Section 91.531(b) should not be read in isolation from the remainder of § 91.531. Section 91.531 prescribes SIC requirements under subpart F of part 91. Subpart F of part 91 applies to large and turbine-powered multiengine airplanes and fractional ownership program aircraft. Section 91.531(b) should be read in context with paragraph (a), which expressly states that exceptions are provided in paragraph (b). The FAA finds that reading § 91.531 in its entirety alleviates AOPA's concern. The FAA is adopting § 91.531(b) as proposed.

AOPA also recommended revising proposed § 91.531(b)(3) to state ''large airplane or turbojet-powered multiengine airplane,'' rather than ''large or turbojet-powered multiengine airplane,'' to prevent any confusion as to whether the paragraph applied to ''large airplanes'' or ''large multiengine airplanes.''

The FAA agrees that proposed § 91.531(b)(3) may have caused confusion specific to large airplanes. The FAA is adopting AOPA's recommendation.

Additionally, the FAA recognizes that § 91.531 has been amended since the FAA published the NPRM on May 12, 2016.[154] Effective August 30, 2017, the FAA amended its airworthiness standards for normal, utility, acrobatic, and commuter category airplanes by replacing the current prescriptive design requirements of part 23 with performance-based airworthiness standards.[155] As part of the part 23 final rule, the FAA replaced the utility, acrobatic, and commuter categories in part 23 with new airplane certification levels. As a result, the FAA amended § 91.531(a)(1) and (3) to incorporate the new airplane certification levels to ensure airplanes certificated in the future under new part 23 airworthiness standards would be addressed by § 91.531. In this final rule, the FAA finds it unnecessary to expressly incorporate the new airplane certification levels in the reorganized rule language of § 91.531(a) because levels 3 and 4 airplanes are already covered by § 91.531(a)(1), which requires a SIC for any airplane that is type certificated for more than one required pilot.

Furthermore, the FAA is relocating the exception in proposed § 91.531(a)(2), which excepts from the SIC requirement any large airplane that is type certificated for single-pilot operation, to § 91.531(b)(1). This change from what was proposed is consistent with the NPRM, which intended to place all affirmative requirements in paragraph (a) and all exceptions in paragraph (b). The FAA notes that, rather than providing an exception for any large airplane certificated under SFAR 41 if that airplane is certificated for operation with one pilot, paragraph (b)(1) excepts any airplane that is certificated for operation with one pilot. It is therefore unnecessary to expressly reference the new airplane certification levels in paragraph (b) because § 91.531(b)(1) will except from the SIC requirement any airplane that is certificated for single-pilot operation, including any airplanes certificated under new part 23 and any large airplanes certificated under SFAR 41. The FAA notes that the remaining requirements of § 91.531 remain unchanged from the proposal.

L. Technical Corrections and Nomenclature Change

In the NPRM, the FAA proposed a technical correction in appendix I to part 141, Additional Aircraft Category and/or Class Rating Course. In paragraph 4.(k), course for an airplane additional multiengine class rating, subparagraph (2) discussing the requirements for the commercial pilot certificate, the FAA noted that two paragraphs were designated as (k)(2)(iv). The FAA proposed to redesignate the second paragraph (k)(2)(iv) as paragraph (k)(2)(v). The FAA received no comments on this correction. The FAA is redesignating the second paragraph (k)(2)(iv) as paragraph (k)(2)(v) as proposed.

Additionally, to reflect the change in nomenclature regarding flight simulators, the FAA proposed to remove the words ''flight simulator'' wherever they appear in the sections the FAA determined needed to be revised and replace them with the words ''full flight simulator.'' The Society of Aviation and Flight Educators agreed with the proposed changes of wording to ''full flight simulator.'' The FAA is adopting the changes as proposed. The following sections are amended to reflect this nomenclature change: §§ 61.31, 61.51, 61.57, 61.109, 61.129, 61.159, 61.161, and section 4 of Appendix D to part 141.

Finally, as discussed in section III.F.2. of this preamble, GAMA recommended the FAA update its nomenclature to reflect the new Airmen Certification Standards (ACS). The FAA began transitioning from the practical test standards (PTS) to the airmen certification standards (ACS) on June 15, 2016. The transition from the PTS to the ACS is an ongoing process in which the FAA is enhancing the guidance it provides to applicants, instructors, and evaluators to better prepare applicants for knowledge and practical tests.[156]

In light of GAMA's comment, the FAA recognized that the following sections still referenced the practical test standards: §§ 61.43, 61.57, 65.59, appendix A to part 65, and appendices A, B, C and D to part 60. The FAA has

[152] Prior to this final rule, certain former military aircraft and some experimental aircraft that were designed to be flown by one pilot were required under § 91.531(a) to have a SIC because they qualified as a large airplane. These airplanes were not eligible to obtain an LOA under § 91.531(b) because they were not type certificated. Under § 91.531(b), the Administrator was allowed only to issue LOAs for the operation of an airplane without an SIC ''if that airplane is designed for and type certificated with only one pilot station.''

[153] As stated in the NPRM, the FAA also proposed to eliminate inconsistencies, redundancies, and obsolete provisions in § 91.531, including the language found in former paragraph (d). 81 FR at 29744. The FAA notes that former § 91.531(d), which applied to part 91, subpart K aircraft, was redundant to § 91.1049(d). Section 91.1049(d) states, ''[u]nless otherwise authorized by the Administrator, when any program aircraft is flown in program operations with passengers onboard, the crew must consist of at least two qualified pilots employed or contracted by the program manager or the fractional owner.''

[154] Regulatory Relief: Aviation Training Devices; Pilot Certification, Training, and Pilot Schools; and Other Provisions, proposed rule, 81 FR 29720 (May 12, 2016).

[155] Revisions of Airworthiness Standards for Normal, Utility, Acrobatic, and Commuter Category Airplanes, final rule, 81 FR 96572 (Dec. 30, 2016) (part 23 final rule).

[156] The ACS offers a more comprehensive and integrated presentation of standards for the knowledge and practical test for an airman certificate or rating.

decided to revise these sections to reflect the transition to the ACS.

In § 61.57(d), the FAA is removing the reference to the PTS. The FAA recognizes that it was inappropriate for § 61.57(d) to state that the areas of operation and instrument tasks were required in the instrument rating PTS. The PTS and ACS do not contain regulatory requirements. Therefore, rather than referencing the instrument rating ACS in § 61.57(d), the FAA is codifying in § 61.57(d) the areas of operation for an IPC. The FAA finds that this revision is not a substantive change because the areas of operation and instrument tasks required for an IPC remain unchanged. Thus, an IPC is still driven by the standards for the instrument rating practical test.[157]

In § 61.43(a)(1), the FAA is removing the reference to the PTS as unnecessary. The FAA is also removing from § 65.59 the reference to the aircraft dispatcher PTS, to be consistent with editorial changes made to other regulatory parts pertaining to certification of airmen. In its place, the FAA is requiring an applicant to demonstrate skill in applying the areas of knowledge and the topics outlined in appendix A of part 65 to preflight and all phases of flight, which must include abnormal and emergency procedures. The FAA emphasizes that this is not a substantive change. The areas of operation in the aircraft dispatcher PTS are currently based on an aircraft dispatcher's duties as they relate to the various phases of flight, including preflight, en route, and post-flight, and abnormal and emergency situations that could occur. Therefore, the practical test will still be based on the aircraft dispatcher PTS on the items outlined in appendix A of part 65. Additionally, the aircraft dispatcher PTS will continue to provide direction to examiners on how to administer a practical test.

Additionally, the FAA is removing the references to the practical test standards for FAA Publication FAA–S–8081 series (Practical Test Standards for Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot, and Instrument Ratings) in appendices A, B, C, and D to part 60. These references are replaced with ''FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.''

[157] The areas of operation and instrument tasks are contained in new § 61.57(d)(1). The FAA notes that it is redesignating former § 61.57(d)(1) as new § 61.57(d)(2), and former § 61.57(d)(2) as new § 61.57(d)(3).

IV. Discussion of Effective Dates for Rule Provisions

In the NPRM, the FAA proposed three different effective dates for the various proposed amendments. The proposed amendments would have been effective either 30, 60 or 180 days after the date of publication of the final rule in the **Federal Register**, depending on the type and scale of implementation needed for persons to begin complying with the amended requirements.

The FAA received no comments on the proposed effective dates. The following discussion summarizes when the various amendments included in this final rule will become effective.

Provisions Effective 30 Days After Date of Publication of Final Rule

The following provisions will be effective 30 days after publication of the final rule:

- The revised definition of ''flight simulation training device'' in § 1.1
- All definitions added to § 61.1 and revisions to the definition of ''pilot time'' in § 61.1 regarding the reference to FFSs rather than flight simulators and the allowance for training received or given in an ATD
- Substantive and clarifying amendments to § 61.51(g)(4) and (5) regarding instructor requirement when using an FFS, FTD, or ATD to complete instrument recency experience
- Amendment to § 61.51(h) to include ATDs to accommodate the logging of training time in an ATD
- Amendments to § 135.245 regarding instrument experience requirements
- Amendments to § 61.195 regarding flight instructors with instrument ratings only
- Amendment to § 61.99 and addition of § 61.109(l) regarding credit for training obtained as a sport pilot
- Substantive amendment to § 91.531 regarding single pilot operations of former military airplanes and other airplanes with special airworthiness certificates and clarifying amendments
- Typographical correction to appendix I to part 141
- Revisions related to the transition from the practical test standards to the airman certification standards in §§ 61.43, 61.57, 65.59, appendix A to part 65, and appendices A, B, C and D to part 60

Provisions Effective 60 Days After Date of Publication of Final Rule

The following provisions will be effective 60 days after publication of the final rule:

- Substantive amendments to § 61.129(a)(3)(ii) and (j) and appendix D to part 141 regarding the completion of commercial pilot training in technically advanced airplanes and clarifying amendments to § 61.129(b)(3)(ii)
- Amendments to §§ 61.412, 61.415(h) and 91.109(c) regarding sport pilot flight instructor training privilege
- Amendments to §§ 61.197 and 61.199 regarding military competence for Flight Instructors
- Amendments to § 61.31 regarding the allowance of a § 135.293 pilot-in-command competency check in a complex or high-performance airplane to meet the training requirements for a complex or high-performance airplane, respectively

Provisions Effective 150 Days After Date of Publication of Final Rule

The following provisions will be effective 150 days after publication of the final rule:

- Revisions to the definition of ''pilot time'' in § 61.1 regarding the allowance of SIC time obtained under the SIC PDP in accordance with § 135.99(c)
- Amendments to § 61.57(c) regarding instrument experience requirements
- Amendments to §§ 61.39, 61.51(e) and (f), 61.159(a), (c), and (d)-(f), 61.161, and 135.99(c) and (d) regarding logging flight time as a second in command in part 135 operations
- Amendment to § 141.5(d) regarding pilot school use of special curricula courses for renewal of certificate

Provisions Effective 180 Days After Date of Publication of Final Rule

The following provisions will be effective 180 days after publication of the final rule:

- Amendments to §§ 61.3(a) and (l), 63.3, 63.16, 121.383(a) through (c), 91.1015 and 135.95 regarding temporary validation of flightcrew members' certificates
- Amendments to § 91.313 regarding use of aircraft certificated in the restricted category for pilot flight training, checking, and testing.

V. Advisory Circulars and Other Guidance Materials

To further implement this final rule, the FAA is revising or creating the following Advisory Circulars and FAA Orders.

FAA Order 8900.1, Flight Standards Information Management System, Vol. 11, Chapter 10, Basic and Advanced Aviation Training Device, Sec. 1, Approval and Authorized Use under 14

CFR parts 61 and 141 guidance concerning ATD's will be revised.

FAA Order 8900.1, Flight Standards Information Management System, Vol. 5 Airmen Certification, Chapter 1 Direction, Guidance, and Procedures for Title 14 CFR parts 121/135 and General Aviation, Sec. 1, General Information, will be revised adding a new paragraph to facilitate application to the General Aviation and Commercial Division for new technology TAA designation.

The Commercial Pilot—Airplane ACS will be revised to no longer require a complex or turbine powered airplane to be provided for part of the practical test, and the Flight Instructor PTS for Airplane will be revised to no longer require a complex airplane to be provided for part of the practical test.

AC 135–43: This document will be a new AC (Part 135 SIC Professional Development Program) that will provide part 135 operators guidance on receiving FAA approval for training and qualifying pilots to act as an SIC and log that time for the ATP flight time requirements.

AC 61–65, Certification: Pilots and Flight and Ground Instructors will be revised to include endorsements and guidance pertaining to the sport pilot provisions. This will include the recommended endorsement for qualifying a sport pilot only instructor to give basic instrument flight instruction to sport pilot candidates only. Additional guidance will be provided concerning reference to the General Aviation and Commercial Division, to qualify aircraft as TAA that otherwise do not meet the criteria defined in the rule definition.

AC 141–1 *Pilot School Certification* will be revised to reflect the allowance to use graduates from special curricula courses as a counter for those pilot schools obtaining initial or renewal pilot school certification.

AC 00–70: This document will be a new AC (Flightcrew Member Certificate Verification Plan) that will provide part 121 air carriers, part 135 air carriers/operators, and part 91, subpart K, program managers guidance on receiving FAA approval of a certificate verification plan to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges.

FAA Order 8900.1, Flight Standards Information Management System, Vol. 5, Airman Certification, Chapter 1, Direction, Guidance and Procedures for Parts 121/135 and General Aviation, Sec. 7, Amendments to Certificates and Replacement of Lost Certificates will be revised to provide guidance concerning temporary documents verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications/management specifications.

FAA Order 8900.1, Flight Standards Information Management System, Vol. 5, Airman Certification, Chapter 2, Title 14 CFR part 61 Certification of Pilots and Flight Instructors, Sec. 15, Issue a Title 14 CFR part 61 Pilot Certificate Based on Military Competence; and FAA Order 8900.2, General Aviation Airman Designee Handbook, Chapter 7, Designated Pilot Examiner Program, Sec. 19, Accomplish Designation/Issue Certificates as an ACR Employed Solely by a FIRC Sponsor, Paragraph 121, Flight Instructor Certificate and Ratings Issued on the Basis of Military Competence by an MCE and MC/FPE, and Paragraph 122, Certification of Graduates; and Sec. 20, Accomplish Designation/Conduct Functions as an MCE, FPE, MC/FPE, GIE, and FIRE, Paragraphs 123–127, Background, General Information for MCE, FPE, and MC/FPE Designations, Issuance of a U.S. Private Pilot Certificate and Ratings Based on Foreign Pilot Licenses, Pilot Certificates and Ratings Issued on the Basis of Military Competence by an MCE and MC/FPE, and Compliance with Other Provisions, respectively, guidance concerning flight instructor certificate renewal via military competence will be revised regarding the military flight instructor provisions included in this final rule.

VI. Section-By-Section Discussion of the Final Rule

In part 1, definitions and abbreviations, in § 1.1, the definition of ''flight simulation training device'' is revised.

In part 60, flight simulation training device initial and continuing qualification and use, appendices A, B, C, and D are revised to remove the references to the FAA Publication FAA–S–8081 series (Practical Test Standards for Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot, and Instrument Ratings) to reflect the transition to the airman certification standards. These references are replaced with ''FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.''

In part 61, certification: Pilots, flight instructors, and ground instructors, in § 61.1, the definition of ''pilot time'' is revised. New definitions are added to § 61.1(b) for ''aviation training device'' and ''technically advanced airplane.''

Section 61.3(a) is revised to permit a pilot flightcrew member to carry a temporary document as a required pilot certificate for operating a civil aircraft of the United States. This document must be provided under an approved certificate verification plan by a part 119 certificate holder conducting operations under part 121 or 135 or a fractional ownership program manager conducting operations under part 91, subpart K. Section 61.3(l) is revised to require the temporary document to be presented for inspection upon request of certain persons.

Section 61.31 is revised to add an exception in § 61.31(e) and (f) to allow a § 135.293 pilot-in-command competency check completed in a complex or high performance airplane to meet the training requirements for a complex or high performance airplane, respectively.

Section 61.39 is revised to add a provision that requires a pilot who has logged flight time under the SIC professional development program requirements of § 61.159(c) to present a copy of the records required by § 135.63(a)(4)(vi) and (x) at the time of application for the practical test.

Section 61.43 is revised to remove the reference to the practical test standards to reflect the transition to the airman certification standards.

Section 61.51(e) is revised to allow a commercial pilot or ATP acting as PIC of a part 135 operation to log all of the flight time as PIC flight time even when the SIC is the sole manipulator of the controls under an approved SIC PDP. Section 61.51(e) is also revised to prohibit an SIC from logging PIC time when the SIC is the sole manipulator of the controls under an approved SIC PDP. Section 61.51(f) is revised to reflect the allowance for SICs to log flight time in part 135 operations when not serving as required flightcrew members under the type certificate or regulations. Section 61.51(g) is revised to allow a pilot to accomplish instrument experience when using a FFS, FTD, or ATD without an instructor present. Section 61.51(h) is revised to include ATDs to accommodate the logging of training time in an ATD.

Section 61.57(c) is revised to allow pilots to accomplish instrument experience in ATDs at the same 6-month interval allowed for FFSs and FTDs. In addition, the section is revised to no longer require pilots, who opt to use ATDs for accomplishing instrument experience, to complete a specific number of additional instrument experience hours or additional tasks. Finally, § 61.57(d) is being revised to remove the reference to the practical test

standards and codifying the areas of operation and instrument tasks required for an IPC.

Section 61.99 is revised to allow flight training received from a flight instructor with a sport pilot rating who does not also hold a flight instructor certificate issued under the requirements in subpart H of part 61 to be credited toward the flight training and aeronautical experience requirements for a recreational pilot certificate with airplane or rotorcraft categories.

Section 61.109 is revised by adding paragraph (l) to allow flight training received from a flight instructor with a sport pilot rating who does not also hold a flight instructor certificate issued under the requirements in subpart H of part 61 to be credited toward the flight training and aeronautical experience requirements for a private pilot certificate with airplane, rotorcraft, or lighter-than-air categories.

Section 61.129(a)(3)(ii) is revised to allow a pilot seeking an initial commercial pilot certificate with an airplane single engine rating to complete 10 hours of training, currently required in a complex or turbine-powered airplane, to also be completed in a TAA or any combination thereof. Section 61.129(a)(3)(ii) is also revised to include a reference to the requirements of paragraph (j) because the FAA is relocating the proposed requirements regarding what a TAA must contain to § 61.129(j). Coordinated revisions are made in § 61.129(b)(3)(ii) for clarity and consistency purposes only.

Section 61.159 is revised to permit flight time logged under an approved SIC PDP to be used to meet certain flight time requirements for an ATP certificate with an airplane category rating.

Section 61.161 is revised to permit flight time logged under an approved SIC PDP to be used to meet certain flight time requirements for an ATP certificate with a rotorcraft category and helicopter class rating.

Section 61.195(b) and (c) are revised to permit a flight instructor who holds only an instrument rating to provide instrument training without being required to hold aircraft category and class ratings on his or her flight instructor certificate if both the flight instructor and the pilot receiving training hold a pilot certificate with the appropriate category and class ratings. Flight instructors who wish to provide instrument training in a multiengine airplane must still have that additional category and class on their flight instructor certificate.

Section 61.197(a)(2)(iv) is revised to allow a military instructor who has passed a U.S. Armed Forces military instructor pilot proficiency check within the 24 calendar months preceding the month of application to be eligible to renew his or her FAA flight instructor certificate based on that proficiency check. The section is clarified to indicate that a flight instructor is able to renew his or her certificate by providing a record demonstrating that, within the previous 24 calendar months, the instructor passed a military instructor pilot proficiency check for a rating that the instructor already holds or for a new rating.

Section 61.199 is revised to permit a military instructor to reinstate his or her flight instructor certificate by providing a record showing that, within the previous six calendar months, the instructor passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check for an additional military rating or completed a U.S. Armed Forces' instructor pilot or pilot examiner training course and received an additional aircraft rating qualification as a military instructor pilot or pilot examiner. Section 61.199(c) is added as a temporary provision to provide a reinstatement method for military instructors and examiners who allowed their FAA instructor certificates to expire before the regulations allowed them to add a rating based on military instructor competence.

Section 61.412 is added to establish training and endorsement requirements for those sport pilot flight instructors who want to provide training for sport-pilot applicants on control and maneuvering solely by reference to the flight instruments.

Section 61.415 is revised by adding new paragraph (h) to clarify that a sport pilot instructor may not conduct flight training on control and maneuvering an aircraft solely by reference to the instruments in an airplane that has a V_h greater than 87 knots CAS without meeting the requirements in § 61.412.

In part 63, certification: Flight crewmembers other than pilots, § 63.3(a) is revised to permit a flight engineer flightcrew member to carry a temporary verification document as an airman certificate or medical certificate, as appropriate. This document must be provided under an approved certificate verification plan by a part 119 certificate holder conducting operations under part 121. Section 63.3(e) is revised to require the temporary document to be presented for inspection upon request of certain persons.

Section 63.16 is revised to update the process for replacement of a lost or destroyed airman certificate or medical certificate and to add a process for replacement of a lost or destroyed knowledge test report.

In part 65, certification: Airmen other than flight crewmembers, § 65.59 and appendix A are revised to update the terminology to reflect the transition to the airman certification standards.

In part 91, general operating and flight rules, § 91.109(c) is revised to permit a sport pilot instructor who has obtained the endorsement in § 61.412 to serve as a safety pilot only for the purpose of providing flight training on control and maneuvering solely by reference to the instruments to a sport pilot applicant seeking a solo endorsement in an airplane with a V_h greater than 87 knots CAS.

Section 91.313 is revised to permit operators of aircraft certificated in the restricted category to operate those aircraft for the purpose of providing pilot training and testing, to pilots employed by the operator to perform the special purpose operation, that leads to a type rating designation required by § 61.31(a) (and an ATP certificate obtained concurrently with a type rating). The section is amended to allow flights to be conducted in restricted category aircraft for the purpose of designating examiners and qualifying FAA inspectors in the aircraft type and conducting oversight and observation of designated examiners.

Section 91.531 is revised to allow certain large airplanes that are not type-certificated to be operated without a pilot who is designated as SIC, provided that those airplanes: (1) Were originally designed with only one pilot station; or (2) were originally designed with more than one pilot station for purposes of flight training or for other purposes, but were operated by a branch of the United States armed forces or the armed forces of a foreign contracting State to the Convention on International Civil Aviation with only one pilot. The section is revised to eliminate redundancies and reorganized for purposes of clarification by placing all affirmative requirements for a SIC in paragraph (a) and all exceptions thereto in paragraph (b).

Section 91.1015 is revised to permit a fractional ownership program manager to obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the program manager's management specifications.

In part 121, operating requirements: Domestic, flag, and supplemental operations, § 121.383(b) is revised to require the temporary document to be

presented for inspection upon request of the Administrator. Section 121.383(c) is revised to permit a certificate holder to obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications.

In part 135, operating requirements: Commuter and on demand operations and rules governing persons on board such aircraft, § 135.95 is revised to permit a certificate holder to obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications.

Section 135.99 is revised to add paragraph (c) to permit a certificate holder conducting part 135 operations to receive approval of an SIC PDP via operations specifications (Ops Specs) in order to allow their pilots to log time as SICs in an operation that does not require an SIC by type certification of the aircraft or the regulations under which the flight is being conducted. The paragraph includes requirements related to the certificate holder, aircraft, and pilots involved. Section 135.99(d) states that certificate holders who have been approved to deviate from the requirements in § 135.21(a), § 135.341(a), or § 119.69(a) are not permitted to obtain approval to conduct an SIC PDP.

Section 135.245 is revised to remove the reference to part 61 in § 135.245(a) and move the current instrument experience requirements in § 61.57(c) and (d) to new § 135.245(c) and (d).

In part 141, pilot schools, § 141.5(d) is revised to add an end-of-course test for a special curricula course approved under § 141.57 to the list of activities a pilot school may use for the FAA to issue or renew a pilot school certificate.

Appendix D to part 141, commercial pilot certification course, is revised to allow commercial pilot certification courses to reflect the relief in § 61.129(a)(3)(ii) that permits a pilot seeking a commercial pilot certificate with an airplane single engine class rating to complete the 10 hours of training in one, or a combination of, a TAA, a complex airplane, or a turbine-powered airplane.

Appendix I to part 141, additional aircraft category and/or class rating course, section 4, paragraph (k)(2) is revised by redesignating the second paragraph (k)(2)(iv) as paragraph (k)(2)(v).

VII. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866, and Executive Order 13563, direct 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). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this rule. We suggest readers seeking greater detail read the full regulatory evaluation, a copy of which we have placed in the docket for this rulemaking.

In conducting these analyses, FAA has determined that this final rule: (1) Has benefits that justify its costs, (2) is not an economically ''significant regulatory action'' as defined in section 3(f) of Executive Order 12866, (3) is not ''significant'' as defined in DOT's Regulatory Policies and Procedures; (4) will not result in a significant economic impact on a substantial number of small entities, because this rule provides modest cost savings without imposing significant costs; (5) will not create unnecessary obstacles to the foreign commerce of the United States; and (6) will not impose an unfunded mandate on state, local, or tribal governments, or on the private sector by exceeding the threshold identified above. These analyses are summarized below, and a full discussion of the benefits and costs is provided in the regulatory evaluation included in the docket for this rulemaking.

Who is potentially affected by this rule?

This final rule will provide regulatory relief and benefits to pilots, student pilots, flight instructors, military pilots seeking civilian ratings, and pilot schools.

Assumptions

1. Analysis Time Period—5 Years
2. Discount Rates—3% and 7%
3. Analysis Base Dollar Year—2016

Summary of Cost Savings

The amendments in this final rule reduce or relieve existing burdens on the general aviation community and part 135 operators. Several of these changes result from comments from the general aviation community through petitions for rulemaking, industry/agency meetings, and requests for legal interpretation. The changes include: reduction in time and flexibilities in the use of ATDs, FTDs, and FFSs; expanded opportunities for pilots in part 135 operations to log flight time; allowed alternatives to the complex airplane requirement for commercial pilot training; and, an allowance for pilots to credit some of their sport pilot training toward a higher certificate. This final rule does not result in additional costs.

The present value total cost savings over the 5-year period of analysis is about $93.1 million with an annualized cost savings of about $22.7 million at a 7% discount rate. The following table summarizes unquantified and monetized cost savings over the 5-year period of analysis.

TABLE 2—SUMMARY OF RULE PROVISIONS

Provision/area of regulatory relief	Total 5-year cost savings (millions of $2016 dollars)*		
	2016$	PV at 3%	PV at 7%
Allow a pilot to accomplish instrument recency experience in an FFS, FTD, or ATD without an instructor present	$12.5	$11.4	$10.3
Reduction in interval and time for pilots using ATDs	83.1	76.1	68.2
Allowance to use less expensive basic airplanes for tests instead of more expensive complex airplanes	3.1	2.8	2.6
Credit for training obtained as a sport pilot*	14.0	13.3	12.3
5-Year Total	113.5	104.0	93.1
Provisions With Unquantified Minimal Cost Savings			
Second in Command for part 135 operations.			
Instrument recency experience for SICs serving in Part 135 operations.			
Flight instructors with instrument ratings only.			
Sport pilot flight instructor training privilege.			
Include special curricula courses in renewal of pilot school certificate.			
Temporary validation of flightcrew members' certificates.			
Military competence for flight instructors.			
Restricted category aircraft training and testing allowances.			
Single pilot operations of former military airplanes and other airplanes with special airworthiness certificates.			

*Totals may not sum due to rounding.

The following table summarizes annualized cost savings at a 7% discount rate (annualized estaimtes at a 3% discount rate are almost the same in this analysis). The reduction in interval and time for pilots using ATDs comprises about 75% of the savings of this final rule.

TABLE 3—SUMMARY OF ANNUALIZED COST SAVINGS*

Provision/area of regulatory relief	Annualized cost savings at 7% ($M)
Allow a pilot to accomplish instrument recency experience in an FFS, FTD, or ATD without an instructor present	$2.5
Reduction in interval and time for pilots using ATDs	16.6
Allowance to use TAAs for training and less expensive basic airplanes for tests instead of more expensive complex airplanes	.6
Credit for training obtained as a sport pilot	3.0
Total	22.7

*Estimates may total due to rounding.

B. 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.

Most of the parties affected by this final rule will be small businesses such as flight instructors, aviation schools, fixed base operators, and small part 135 air carriers. There are over 1,000 part 135 air carriers alone. The general lack of publicly available financial information from these small businesses precludes a financial analysis of these small businesses.

This final rule will affect a substantial number of small entities. However, this final rule will not impose a significant impact on those entities because this rule provides modest cost savings without imposing significant costs.

Therefore, as provided in section 605(b), the head of the FAA certifies that this final rule will not result in a significant economic impact on a substantial number of small entities, as it imposes no new costs.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the

Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. 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 final rule and determined that it will have only a domestic impact and therefore would not create unnecessary obstacles to the foreign commerce of the United States.

D. 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 (in 1995 dollars) 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 FAA currently uses an inflation-adjusted value of $155.0 million in lieu of $100 million.

This final rule does not contain such a mandate. Therefore, the requirements of Title II of the Act do not apply.

E. 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. According to the 1995 amendments to the Paperwork Reduction Act, (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid Office of Management and Budget (OMB) control number.

In the proposed rule the FAA identified three provisions with PRA implications that will require amended OMB supporting statements:

- Instrument recency experience requirements (information collection 2120–0021),
- Second in command for part 135 operations (information collection 2120–0021, 2120–0593, 2120–0039),
- Include special curricula courses in renewal of pilot school certificate (information collection 2120–0009).

The FAA did not receive any comments regarding its proposed revision to any of the listed information collections. However, as the FAA was developing this final rule, it recognized that it had not provided an opportunity for meaningful comment regarding the proposed revisions to information collections 2120–0021, 2120–0039 and 2120–0009.[158] While the FAA had described the changes in burden it did not provide estimates of the total number of respondents affected by some of the changes. To ensure transparency and a meaningful opportunity for comment, the FAA published three notices seeking specific comment regarding the revisions being made to each of these information collections as part of this final rule.[159] The revisions to these information collections will follow the notice and comment requirements of the Paperwork Reduction Act and will be submitted to OMB for review and approval.

The FAA notes that the effective dates of the provisions of this final rule with information collection revisions have been adjusted from the effective dates that were proposed to address the Paperwork Reduction Act requirements for notice and OMB approval.

F. International Compatibility and Cooperation

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to ICAO Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has identified the following differences with these proposed regulations.

The FAA notes that, under § 61.159(c), pilots are permitted to log second in command flight time in part 135 operations when a second pilot is not required. ICAO standards do not recognize the crediting of flight time when a pilot is not required by the aircraft certification or the operation under which the flight is being conducted. Accordingly, all pilots who log flight time under this provision and apply for an ATP certificate would have a limitation on the certificate indicating that the pilot does not meet the PIC aeronautical experience requirements of ICAO. This limitation may be removed when the pilot presents satisfactory evidence that he or she has met the ICAO standards.

Additionally, the FAA is allowing part 119 certificate holders conducting operations under parts 121 and 135 and program managers conducting operations under part 91 subpart K to issue temporary verification documents to flightcrew members who do not have their airman certificates or medical certificates in their personal possession for a particular flight. A temporary verification document may be used for a period not to exceed 72 hours. Article 29 of the Convention on International Civil Aviation requires that every aircraft engaged in international navigation shall carry ''the appropriate licenses for each member of the crew.'' Accordingly, the FAA is limiting the use of temporary verification documents to flights conducted entirely within the United States.

G. Environmental Analysis

FAA Order 1050.1F identifies 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 5–6.6f and involves no extraordinary circumstances.

VIII. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. The agency has determined that this action would not have a substantial direct effect on the States, or the relationship between the Federal Government and

[158] The FAA notes that for one information collection, 2120–0593: Certification: Air Carriers and Commercial Operators, the FAA provided estimates of the number of respondents and the total burden. Therefore, the FAA provided adequate notice and an opportunity for comment regarding the revisions to information collection 2120–0593 in the NPRM. 81 FR 29749–52. The FAA further notes that this information collection was submitted to OMB during the comment period for the NPRM. OMB filed comment and continued the information collection on January 2, 2017.

[159] Agency Information Collection Activities: Requests for Comments; Clearance of Renewed Approval of Information Collection: Pilot Schools-FAR 141, 83 FR 27820 (Jun. 14, 2018); Agency Information Collection Activities: Requests for Comments; Clearance of Renewed Approval of Information Collection: Certification: Pilots, Flight Instructors, and Ground Instructors, 83 FR 27821 (Jun. 14, 2018); Agency Information Collection Activities: Requests for Comments; Clearance of a Revision to an Approval of an Existing Information Collection: Operating Requirements: Commuter and On-Demand Operation, 83 FR 27822 (Jun. 14, 2018).

the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have Federalism implications.

B. Executive Order 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The agency has determined that it would not be a ''significant energy action'' under the executive order and would not be likely to have a significant adverse effect on the supply, distribution, or use of energy.

C. Executive Order 13609, Promoting International Regulatory Cooperation

Executive Order 13609, Promoting International Regulatory Cooperation, (77 FR 26413, May 4, 2012) promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policies and agency responsibilities of Executive Order 13609, and has determined that this action would have no effect on international regulatory cooperation.

D. Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs

This final rule is considered an E.O. 13771 deregulatory action. Details on the estimated cost savings of this final rule can be found in the rule's economic analysis.

IX. Additional Information

A. Availability of Rulemaking Documents

An electronic copy of rulemaking documents may be obtained from the internet by—

- Searching the Federal eRulemaking Portal (*http://www.regulations.gov*);
- Visiting the FAA's Regulations and Policies web page at *http://www.faa.gov/regulations_policies* or
- Accessing the Government Publishing Office's web page at *http://www.fdsys.gov*.

Copies may also be obtained 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) 267–9677. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this proposed rule, including economic analyses and technical reports, may be accessed from the internet through the Federal eRulemaking Portal referenced above.

B. Small Business Regulatory Enforcement Fairness Act

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

List of Subjects

14 CFR Part 1

Air transportation.

14 CFR Part 60

Airmen, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 61

Aircraft, Airmen, Aviation safety, Teachers.

14 CFR Part 63

Aircraft, Airman, Aviation safety.

14 CFR Part 65

Air traffic controllers, Aircraft, Airmen, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 91

Aircraft, Airmen, Aviation safety.

14 CFR Part 121

Air carriers, Aircraft, Airmen, Aviation safety.

14 CFR Part 135

Aircraft, Airmen, Aviation safety.

14 CFR Part 141

Airmen, Educational facilities, Reporting and recordkeeping requirements, Schools.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends chapter I of title 14, Code of Federal Regulations as follows:

PART 1—DEFINITIONS AND ABBREVIATIONS

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

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

■ 2. In § 1.1, revise the definition of ''Flight simulation training device'' to read as follows:

§ 1.1 General definitions.

* * * * *

Flight simulation training device (FSTD) means a full flight simulator or a flight training device.

* * * * *

PART 60—FLIGHT SIMULATION TRAINING DEVICE INITIAL AND CONTINUING QUALIFICATION AND USE

■ 3. The authority citation for part 60 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, and 44701; Pub. L. 111–216, 124 Stat. 2348 (49 U.S.C. 44701 note).

■ 4. In appendix A, revise paragraph 1.d.(27) to read as follows:

Appendix A to Part 60—Qualification Performance Standards for Airplane Full Flight Simulators

* * * * *

1. * * *

d. * * *

(27) FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.

* * * * *

■ 5. In appendix B, revise paragraph 1.d.(26) to read as follows:

Appendix B to Part 60—Qualification Performance Standards for Airplane Flight Training Devices

* * * * *

1. * * *

d. * * *

(26) FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.

* * * * *

■ 6. In appendix C, revise paragraph 1.d.(25) to read as follows:

Appendix C to Part 60—Qualification Performance Standards for Helicopter Full Flight Simulators

* * * * *

1. * * *

d. * * *

(25) FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.

* * * * *

■ 7. In appendix D, revise paragraph 1.d.(28) to read as follows:

Appendix D to Part 60—Qualification Performance Standards for Helicopter Flight Training Devices

* * * * *

1. * * *

d. * * *

(28) FAA Airman Testing Standards for the Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot Certificate, and Instrument Ratings.

* * * * *

PART 61—CERTIFICATION: PILOTS, FLIGHT INSTRUCTORS, AND GROUND INSTRUCTORS

■ 8. The authority citation for part 61 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701–44703, 44707, 44709–44711, 44729, 44903, 45102–45103, 45301–45302; Sec. 2307 Pub. L. 114–190, 130 Stat. 615 (49 U.S.C. 44703 note).

■ 9. Amend § 61.1(b) as follows:

■ a. Add a definition of ''Aviation training device'' in alphabetical order.

■ b. Revise the definition of ''Pilot time;'' and,

■ c. Add a definition of ''Technically advanced airplane'' in alphabetical order.

The revisions and additions read as follows:

§ 61.1 Applicability and definitions.

* * * * *

(b) * * *

Aviation training device means a training device, other than a full flight simulator or flight training device, that has been evaluated, qualified, and approved by the Administrator.

* * * * *

Pilot time means that time in which a person—

(i) Serves as a required pilot flight crewmember;

(ii) Receives training from an authorized instructor in an aircraft, full flight simulator, flight training device, or aviation training device; or

(iii) Gives training as an authorized instructor in an aircraft, full flight simulator, flight training device, or aviation training device.

* * * * *

Technically advanced airplane (TAA) means an airplane equipped with an electronically advanced avionics system.

* * * * *

■ 10. Effective November 26, 2018, in § 61.1(b), amend the definition of ''Pilot time'' by removing the word ''or'' at the end of paragraph (ii), revising paragraph (iii), and adding paragraph (iv) to read as follows:

§ 61.1 Applicability and definitions.

* * * * *

(b) * * *

Pilot time * * *

(iii) Gives training as an authorized instructor in an aircraft, full flight simulator, flight training device, or aviation training device; or

(iv) Serves as second in command in operations conducted in accordance with § 135.99(c) of this chapter when a second pilot is not required under the type certification of the aircraft or the regulations under which the flight is being conducted, provided the requirements in § 61.159(c) are satisfied.

* * * * *

■ 11. Effective December 24, 2018, in § 61.3, revise paragraph (a)(1)(iv), redesignate paragraph (a)(1)(v) as paragraph (a)(1)(vii), add paragraphs (a)(1)(v) and (vi), and revise paragraph (l) introductory text to read as follows:

§ 61.3 Requirement for certificates, ratings, and authorizations.

(a) * * *

(1) * * *

(iv) A document conveying temporary authority to exercise certificate privileges issued by the Airmen Certification Branch under § 61.29(e);

(v) When engaged in a flight operation within the United States for a part 119 certificate holder authorized to conduct operations under part 121 or 135 of this chapter, a temporary document provided by that certificate holder under an approved certificate verification plan;

(vi) When engaged in a flight operation within the United States for a fractional ownership program manager authorized to conduct operations under part 91, subpart K, of this chapter, a temporary document provided by that program manager under an approved certificate verification plan; or

* * * * *

(l) *Inspection of certificate.* Each person who holds an airman certificate, temporary document in accordance with paragraph (a)(1)(v) or (vi) of this section, medical certificate, documents establishing alternative medical qualification under part 68 of this chapter, authorization, or license required by this part must present it and their photo identification as described in paragraph (a)(2) of this section for inspection upon a request from:

* * * * *

■ 12. Amend § 61.31 as follows:

■ a. Effective July 27, 2018, in paragraphs (e)(1)(i), (f)(1)(i), (g)(2) and (3), and (h)(1), remove the words ''flight simulator'' and add in their place the words ''full flight simulator''; and

■ b. Effective August 27, 2018, revise paragraphs (e)(2) and (f)(2).

The revisions read as follows:

§ 61.31 Type rating requirements, additional training, and authorization requirements.

* * * * *

(e) * * *

(2) The training and endorsement required by paragraph (e)(1) of this section is not required if—

(i) The person has logged flight time as pilot in command of a complex airplane, or in a full flight simulator or flight training device that is representative of a complex airplane prior to August 4, 1997; or

(ii) The person has received ground and flight training under an approved training program and has satisfactorily completed a competency check under § 135.293 of this chapter in a complex airplane, or in a full flight simulator or flight training device that is representative of a complex airplane which must be documented in the pilot's logbook or training record.

(f) * * *

(2) The training and endorsement required by paragraph (f)(1) of this section is not required if—

(i) The person has logged flight time as pilot in command of a high-performance airplane, or in a full flight simulator or flight training device that is representative of a high-performance airplane prior to August 4, 1997; or

(ii) The person has received ground and flight training under an approved training program and has satisfactorily completed a competency check under § 135.293 of this chapter in a high performance airplane, or in a full flight simulator or flight training device that is representative of a high performance airplane which must be documented in the pilot's logbook or training record.

* * * * *

■ 13. Effective November 26, 2018, in § 61.39, revise paragraph (a)(3) to read as follows:

§ 61.39 Prerequisites for practical tests.

(a) * * *

(3) Have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed by this part for the certificate or rating sought, and if applying for the practical test with flight time accomplished under § 61.159(c), present a copy of the records required by § 135.63(a)(4)(vi) and (x) of this chapter;

* * * * *

■ 14. In § 61.43, revise paragraph (a)(1) to read as follows:

§ 61.43 Practical tests: General procedures.

(a) * * *

(1) Performing the tasks specified in the areas of operation for the airman certificate or rating sought;

* * * * *

■ 15. Amend § 61.51 as follows:

■ a. Effective July 27, 2018, in paragraphs (b)(1)(iii) and (iv), (b)(2)(v), (b)(3)(iii) and (iv), (k)(1)(ii), and (k)(2)(ii), remove the words ''flight simulator'' and add in their place the words ''full flight simulator'';

■ b. Effective November 26, 2018, revise paragraph (e)(1)(i);

■ c. Effective November 26, 2018, add paragraph (e)(5);

■ d. Effective November 26, 2018, revise paragraphs (f)(1) and (2);

■ e. Effective November 26, 2018, add paragraph (f)(3);

■ f. Effective July 27, 2018, revise paragraph (g)(4);

■ g. Effective July 27, 2018, add paragraph (g)(5); and

■ h. Effective July 27, 2018, revise paragraph (h)(1).

The revisions and additions read as follows:

§ 61.51 Pilot logbooks.

* * * * *

(e) * * *

(1) * * *

(i) Except when logging flight time under § 61.159(c), when the pilot is the sole manipulator of the controls of an aircraft for which the pilot is rated, or has sport pilot privileges for that category and class of aircraft, if the aircraft class rating is appropriate;

* * * * *

(5) A commercial pilot or airline transport pilot may log all flight time while acting as pilot in command of an operation in accordance with § 135.99(c) of this chapter if the flight is conducted in accordance with an approved second-in-command professional development program that meets the requirements of § 135.99(c) of this chapter.

(f) * * *

(1) Is qualified in accordance with the second-in-command requirements of § 61.55, and occupies a crewmember station in an aircraft that requires more than one pilot by the aircraft's type certificate;

(2) Holds the appropriate category, class, and instrument rating (if an instrument rating is required for the flight) for the aircraft being flown, and more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is being conducted; or

(3) Serves as second in command in operations conducted in accordance with § 135.99(c) of this chapter when a second pilot is not required under the type certification of the aircraft or the regulations under which the flight is being conducted, provided the requirements in § 61.159(c) are satisfied.

(g) * * *

(4) A person may use time in a full flight simulator, flight training device, or aviation training device for acquiring instrument aeronautical experience for a pilot certificate or rating provided an authorized instructor is present to observe that time and signs the person's logbook or training record to verify the time and the content of the training session.

(5) A person may use time in a full flight simulator, flight training device, or aviation training device for satisfying instrument recency experience requirements provided a logbook or training record is maintained to specify the training device, time, and the content.

(h) *Logging training time.* (1) A person may log training time when that person receives training from an authorized instructor in an aircraft, full flight simulator, flight training device, or aviation training device.

* * * * *

■ 16. Amend § 61.57 as follows:

■ a. Effective July 27, 2018, in paragraphs (a)(3), (b)(2), (d)(1)(ii), (e)(4)(ii)(D), and (g) introductory text, remove the words ''flight simulator'' and add in their place the words ''full flight simulator'';

■ b. Effective July 27, 2018, in paragraph (e)(4)(ii)(D), remove the words ''flight simulator's'' and add in their place the words ''full flight simulator's'';

■ c. Effective November 26, 2018, revise paragraph (c)(2), remove paragraphs (c)(3) through (5), and redesignate paragraph (c)(6) as paragraph (c)(3);

■ d. Effective July 27, 2018, redesignate paragraphs (d)(1) and (2) as paragraphs (d)(2) and (3), redesignate the introductory text of paragraph (d) as paragraph (d)(1), and revise newly redesignated paragraph (d)(1).

The revisions read as follows:

§ 61.57 Recent flight experience: Pilot in command.

* * * * *

(c) * * *

(2) *Use of a full flight simulator, flight training device, or aviation training device for maintaining instrument experience.* A pilot may accomplish the requirements in paragraph (c)(1) of this section in a full flight simulator, flight training device, or aviation training device provided the device represents the category of aircraft for the instrument rating privileges to be maintained and the pilot performs the tasks and iterations in simulated instrument conditions. A person may complete the instrument experience in any combination of an aircraft, full flight simulator, flight training device, or aviation training device.

* * * * *

(d) *Instrument proficiency check.* (1) Except as provided in paragraph (e) of this section, a person who has failed to meet the instrument experience requirements of paragraph (c) of this section for more than six calendar months may reestablish instrument currency only by completing an instrument proficiency check. The instrument proficiency check must consist of at least the following areas of operation:

(i) Air traffic control clearances and procedures;

(ii) Flight by reference to instruments;

(iii) Navigation systems;

(iv) Instrument approach procedures;

(v) Emergency operations; and

(vi) Postflight procedures.

* * * * *

■ 17. Revise § 61.99 to read as follows:

§ 61.99 Aeronautical experience.

(a) A person who applies for a recreational pilot certificate must receive and log at least 30 hours of flight time that includes at least—

(1) 15 hours of flight training from an authorized instructor on the areas of operation listed in § 61.98 that consists of at least:

(i) Except as provided in § 61.100, 2 hours of flight training en route to an airport that is located more than 25 nautical miles from the airport where the applicant normally trains, which includes at least three takeoffs and three landings at the airport located more than 25 nautical miles from the airport where the applicant normally trains; and

(ii) Three hours of flight training with an authorized instructor in the aircraft for the rating sought in preparation for the practical test within the preceding 2 calendar months from the month of the test.

(2) Three hours of solo flying in the aircraft for the rating sought, on the areas of operation listed in § 61.98 that apply to the aircraft category and class rating sought.

(b) The holder of a sport pilot certificate may credit flight training received from a flight instructor with a sport pilot rating toward the aeronautical experience requirements of this section if the following conditions are met:

(1) The flight training was accomplished in the same category and

class of aircraft for which the rating is sought;

(2) The flight instructor with a sport pilot rating was authorized to provide the flight training; and

(3) The flight training included training on areas of operation that are required for both a sport pilot certificate and a recreational pilot certificate.

■ 18. In § 61.109, amend paragraph (k) by removing the words ''flight simulator'' and adding in their place the words ''full flight simulator'' and add paragraph (l) to read as follows:

§ 61.109 Aeronautical experience.

* * * * *

(l) *Permitted credit for flight training received from a flight instructor with a sport pilot rating.* The holder of a sport pilot certificate may credit flight training received from a flight instructor with a sport pilot rating toward the aeronautical experience requirements of this section if the following conditions are met:

(1) The flight training was accomplished in the same category and class of aircraft for which the rating is sought;

(2) The flight instructor with a sport pilot rating was authorized to provide the flight training; and

(3) The flight training included either—

(i) Training on areas of operation that are required for both a sport pilot certificate and a private pilot certificate; or

(ii) For airplanes with a V_H greater than 87 knots CAS, training on the control and maneuvering of an airplane solely by reference to the flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and ATC directives, provided the training was received from a flight instructor with a sport pilot rating who holds an endorsement required by § 61.412(c).

■ 19. In § 61.129:

■ a. Effective August 27, 2018, revise paragraphs (a)(3)(ii) and (b)(3)(ii);

■ b. Effective July 27, 2018, in paragraphs (c)(3)(i), (d) introductory text, (d)(3)(i), and (i), remove the words ''flight simulator'' and add in their place the words ''full flight simulator''; and

■ c. Effective August 27, 2018, add paragraph (j).

The revisions and addition read as follows:

§ 61.129 Aeronautical experience.

(a) * * *

(3) * * *

(ii) 10 hours of training in a complex airplane, a turbine-powered airplane, or a technically advanced airplane (TAA) that meets the requirements of paragraph (j) of this section, or any combination thereof. The airplane must be appropriate to land or sea for the rating sought;

* * * * *

(b) * * *

(3) * * *

(ii) 10 hours of training in a multiengine complex or turbine-powered airplane; or for an applicant seeking a multiengine seaplane rating, 10 hours of training in a multiengine seaplane that has flaps and a controllable pitch propeller, including seaplanes equipped with an engine control system consisting of a digital computer and associated accessories for controlling the engine and propeller, such as a full authority digital engine control;

* * * * *

(j) *Technically advanced airplane.* Unless otherwise authorized by the Administrator, a technically advanced airplane must be equipped with an electronically advanced avionics system that includes the following installed components:

(1) An electronic Primary Flight Display (PFD) that includes, at a minimum, an airspeed indicator, turn coordinator, attitude indicator, heading indicator, altimeter, and vertical speed indicator;

(2) An electronic Multifunction Display (MFD) that includes, at a minimum, a moving map using Global Positioning System (GPS) navigation with the aircraft position displayed;

(3) A two axis autopilot integrated with the navigation and heading guidance system; and

(4) The display elements described in paragraphs (j)(1) and (2) of this section must be continuously visible.

■ 20. In § 61.159:

■ a. Effective July 27, 2018, amend paragraph (a)(4) by removing the words ''flight simulator'' and adding in their place the words ''full flight simulator''; and

■ b. Effective November 26, 2018, revise the introductory text of paragraphs (a) and (a)(5), revise paragraph (c), redesignate paragraphs (d) and (e) as paragraphs (e) and (f), add new paragraph (d), and revise newly redesignated paragraphs (e) and (f).

The revisions and addition read as follows:

§ 61.159 Aeronautical experience: Airplane category rating.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, a person who is applying for an airline transport pilot certificate with an airplane category and class rating must have at least 1,500 hours of total time as a pilot that includes at least:

* * * * *

(5) 250 hours of flight time in an airplane as a pilot in command, or when serving as a required second in command flightcrew member performing the duties of pilot in command while under the supervision of a pilot in command, or any combination thereof, which includes at least—

* * * * *

(c) A commercial pilot may log second-in-command pilot time toward the aeronautical experience requirements of paragraph (a) of this section and the aeronautical experience requirements in § 61.160, provided the pilot is employed by a part 119 certificate holder authorized to conduct operations under part 135 of this chapter and the second-in-command pilot time is obtained in operations conducted for the certificate holder under part 91 or 135 of this chapter when a second pilot is not required under the type certification of the aircraft or the regulations under which the flight is being conducted, and the following requirements are met—

(1) The experience must be accomplished as part of a second-in-command professional development program approved by the Administrator under § 135.99 of this chapter;

(2) The flight operation must be conducted in accordance with the certificate holder's operations specification for the second-in-command professional development program;

(3) The pilot in command of the operation must certify in the pilot's logbook that the second-in-command pilot time was accomplished under this section; and

(4) The pilot time may not be logged as pilot-in-command time even when the pilot is the sole manipulator of the controls and may not be used to meet the aeronautical experience requirements in paragraph (a)(5) of this section.

(d) A commercial pilot may log the following flight engineer flight time toward the 1,500 hours of total time as a pilot required by paragraph (a) of this section and the total time as a pilot required by § 61.160:

(1) Flight-engineer time, provided the time—

(i) Is acquired in an airplane required to have a flight engineer by the airplane's flight manual or type certificate;

(ii) Is acquired while engaged in operations under part 121 of this

chapter for which a flight engineer is required;

(iii) Is acquired while the person is participating in a pilot training program approved under part 121 of this chapter; and

(iv) Does not exceed more than 1 hour for each 3 hours of flight engineer flight time for a total credited time of no more than 500 hours.

(2) Flight-engineer time, provided the flight time—

(i) Is acquired as a U.S. Armed Forces' flight engineer crewmember in an airplane that requires a flight engineer crewmember by the flight manual;

(ii) Is acquired while the person is participating in a flight engineer crewmember training program for the U.S. Armed Forces; and

(iii) Does not exceed 1 hour for each 3 hours of flight engineer flight time for a total credited time of no more than 500 hours.

(e) An applicant who credits time under paragraphs (b), (c), and (d) of this section is issued an airline transport pilot certificate with the limitation, ''Holder does not meet the pilot in command aeronautical experience requirements of ICAO,'' as prescribed under Article 39 of the Convention on International Civil Aviation.

(f) An applicant is entitled to an airline transport pilot certificate without the ICAO limitation specified under paragraph (e) of this section when the applicant presents satisfactory evidence of having met the ICAO requirements under paragraph (e) of this section and otherwise meets the aeronautical experience requirements of this section.

■ 21. In § 61.161:

■ a. Effective July 27, 2018, amend paragraph (b) by removing the words ''flight simulator'' and adding in their place the words ''full flight simulator''; and

■ b. Effective November 26, 2018, add paragraphs (c), (d), and (e).

The additions read as follows:

§ 61.161 Aeronautical experience: Rotorcraft category and helicopter class rating.

* * * * *

(c) Flight time logged under § 61.159(c) may be counted toward the 1,200 hours of total time as a pilot required by paragraph (a) of this section and the flight time requirements of paragraphs (a)(1), (2), and (4) of this section, except for the specific helicopter flight time requirements.

(d) An applicant who credits time under paragraph (c) of this section is issued an airline transport pilot certificate with the limitation, ''Holder does not meet the pilot in command aeronautical experience requirements of ICAO,'' as prescribed under Article 39 of the Convention on International Civil Aviation.

(e) An applicant is entitled to an airline transport pilot certificate without the ICAO limitation specified under paragraph (d) of this section when the applicant presents satisfactory evidence of having met the ICAO requirements under paragraph (d) of this section and otherwise meets the aeronautical experience requirements of this section.

■ 22. In § 61.195, revise paragraphs (b), (c), and (e) and add paragraph (l) to read as follows:

§ 61.195 Flight instructor limitations and qualifications.

* * * * *

(b) *Aircraft ratings.* Except as provided in paragraph (c) of this section, a flight instructor may not conduct flight training in any aircraft unless the flight instructor:

(1) Holds a flight instructor certificate with the applicable category and class rating;

(2) Holds a pilot certificate with the applicable category and class rating; and

(3) Meets the requirements of paragraph (e) of this section, if applicable.

(c) *Instrument rating.* A flight instructor may conduct instrument training for the issuance of an instrument rating, a type rating not limited to VFR, or the instrument training required for commercial pilot and airline transport pilot certificates if the following requirements are met:

(1) Except as provided in paragraph (c)(2) of this section, the flight instructor must hold an instrument rating appropriate to the aircraft used for the instrument training on his or her flight instructor certificate, and—

(i) Meet the requirements of paragraph (b) of this section; or

(ii) Hold a commercial pilot certificate or airline transport pilot certificate with the appropriate category and class ratings for the aircraft in which the instrument training is conducted provided the pilot receiving instrument training holds a pilot certificate with category and class ratings appropriate to the aircraft in which the instrument training is being conducted.

(2) If the flight instructor is conducting the instrument training in a multiengine airplane, the flight instructor must hold an instrument rating appropriate to the aircraft used for the instrument training on his or her flight instructor certificate and meet the requirements of paragraph (b) of this section.

* * * * *

(e) *Training in an aircraft that requires a type rating.* A flight instructor may not give flight instruction, including instrument training, in an aircraft that requires the pilot in command to hold a type rating unless the flight instructor holds a type rating for that aircraft on his or her pilot certificate.

* * * * *

(l) *Training on control and maneuvering an aircraft solely by reference to the instruments.* A flight instructor may conduct flight training on control and maneuvering an airplane solely by reference to the flight instruments, provided the flight instructor—

(1) Holds a flight instructor certificate with the applicable category and class rating; or

(2) Holds an instrument rating appropriate to the aircraft used for the training on his or her flight instructor certificate, and holds a commercial pilot certificate or airline transport pilot certificate with the appropriate category and class ratings for the aircraft in which the training is conducted provided the pilot receiving the training holds a pilot certificate with category and class ratings appropriate to the aircraft in which the training is being conducted.

■ 23. Effective August 27, 2018, in § 61.197, revise paragraphs (a)(2)(iv) and (c) to read as follows:

§ 61.197 Renewal requirements for flight instructor certification.

(a) * * *

(2) * * *

(iv) A record showing that, within the preceding 24 months from the month of application, the flight instructor passed an official U.S. Armed Forces military instructor pilot or pilot examiner proficiency check in an aircraft for which the military instructor already holds a rating or in an aircraft for an additional rating.

* * * * *

(c) The practical test required by paragraph (a)(1) of this section may be accomplished in a full flight simulator or flight training device if the test is accomplished pursuant to an approved course conducted by a training center certificated under part 142 of this chapter.

■ 24. Effective August 27, 2018, in § 61.199, add paragraphs (a)(3), (c) and (d) to read as follows:

§ 61.199 Reinstatement requirements of an expired flight instructor certificate.

(a) * * *

(3) For military instructor pilots, provide a record showing that, within

the preceding 6 calendar months from the date of application for reinstatement, the person—

(i) Passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check; or

(ii) Completed a U.S. Armed Forces' instructor pilot or pilot examiner training course and received an additional aircraft rating qualification as a military instructor pilot or pilot examiner that is appropriate to the flight instructor rating sought.

* * * * *

(c) *Certain military instructors and examiners.* The holder of an expired flight instructor certificate issued prior to October 20, 2009, may apply for reinstatement of that certificate by presenting the following:

(1) A record showing that, since the date the flight instructor certificate was issued, the person passed a U.S. Armed Forces instructor pilot or pilot examiner proficiency check for an additional military rating; and

(2) A knowledge test report that shows the person passed a knowledge test on the aeronautical knowledge areas listed under § 61.185(a) appropriate to the flight instructor rating sought and the knowledge test was passed within the preceding 24 calendar months prior to the month of application.

(d) *Expiration date.* The requirements of paragraph (c) of this section will expire on August 26, 2019.

■ 25. Effective August 27, 2018, add § 61.412 to read as follows:

§ 61.412 Do I need additional training to provide instruction on control and maneuvering an airplane solely by reference to the instruments in a light-sport aircraft based on V_H?

To provide flight training under § 61.93(e)(12) on control and maneuvering an airplane solely by reference to the flight instruments for the purpose of issuing a solo cross-country endorsement under § 61.93(c)(1) to a student pilot seeking a sport pilot certificate, a flight instructor with a sport pilot rating must:

(a) Hold an endorsement required by § 61.327(b);

(b) Receive and log a minimum of 1 hour of ground training and 3 hours of flight training from an authorized instructor in an airplane with a V_H greater than 87 knots CAS or in a full flight simulator, flight training device, or aviation training device that replicates an airplane with a V_H greater than 87 knots CAS; and

(c) Receive a one-time endorsement in his or her logbook from an instructor authorized under subpart H of this part who certifies that the person is proficient in providing training on control and maneuvering solely by reference to the flight instruments in an airplane with a V_H greater than 87 knots CAS. This flight training must include straight and level flight, turns, descents, climbs, use of radio navigation aids, and ATC directives.

■ 26. Effective August 27, 2018, in § 61.415, redesignate paragraphs (h) and (i) as paragraphs (i) and (j) and add paragraph (h) to read as follows:

§ 61.415 What are the limits of a flight instructor certificate with a sport pilot rating?

* * * * *

(h) You may not provide training on the control and maneuvering of an aircraft solely by reference to the instruments in a light sport airplane with a V_h greater than 87 knots CAS unless you meet the requirements in § 61.412.

* * * * *

PART 63—CERTIFICATION: FLIGHT CREWMEMBERS OTHER THAN PILOTS

■ 27. The authority citation for part 63 is revised to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701–44703, 44707, 44709–44711, 45102–45103, 45301–45302.

■ 28. Effective December 24, 2018, revise § 63.3 to read as follows:

§ 63.3 Certificates and ratings required.

(a) Except as provided in paragraph (c) of this section, no person may act as a flight engineer of a civil aircraft of U.S. registry unless that person has in his or her physical possession or readily accessible in the aircraft:

(1) A current flight engineer certificate with appropriate ratings issued to that person under this part;

(2) A document conveying temporary authority to exercise certificate privileges issued by the Airman Certification Branch under § 63.16(f); or

(3) When engaged in a flight operation within the United States for a part 119 certificate holder authorized to conduct operations under part 121 of this chapter, a temporary document provided by that certificate holder under an approved certificate verification plan.

(b) A person may act as a flight engineer of an aircraft only if that person holds a current second-class (or higher) medical certificate issued to that person under part 67 of this chapter, or other documentation acceptable to the FAA, that is in that person's physical possession or readily accessible in the aircraft.

(c) When the aircraft is operated within a foreign country, a current flight engineer certificate issued by the country in which the aircraft is operated, with evidence of current medical qualification for that certificate, may be used. Also, in the case of a flight engineer certificate issued under § 63.42, evidence of current medical qualification accepted for the issue of that certificate is used in place of a medical certificate.

(d) No person may act as a flight navigator of a civil aircraft of U.S. registry unless that person has in his or her physical possession a current flight navigator certificate issued to him or her under this part and a second-class (or higher) medical certificate issued to him or her under part 67 of this chapter within the preceding 12 months. However, when the aircraft is operated within a foreign country, a current flight navigator certificate issued by the country in which the aircraft is operated, with evidence of current medical qualification for that certificate, may be used.

(e) Each person who holds a flight engineer or flight navigator certificate, medical certificate, or temporary document in accordance with paragraph (a)(3) of this section shall present it for inspection upon the request of the Administrator or an authorized representative of the National Transportation Safety Board, or of any Federal, State, or local law enforcement officer.

■ 29. Effective December 24, 2018, revise § 63.16 to read as follows:

§ 63.16 Change of name; replacement of lost or destroyed certificate.

(a) An application for a change of name on a certificate issued under this part must be accompanied by the applicant's current certificate and the marriage license, court order, or other document verifying the change. The documents are returned to the applicant after inspection.

(b) A request for a replacement of a lost or destroyed airman certificate issued under this part must be made:

(1) By letter to the Department of Transportation, Federal Aviation Administration, Airman Certification Branch, Post Office Box 25082, Oklahoma City, OK 73125 and must be accompanied by a check or money order for the appropriate fee payable to the FAA; or

(2) In any other form and manner approved by the Administrator including a request to Airman Services at *http://www.faa.gov,* and must be accompanied by acceptable form of payment for the appropriate fee.

(c) A request for the replacement of a lost or destroyed medical certificate must be made:

(1) By letter to the Department of Transportation, FAA, Aerospace Medical Certification Division, P.O. Box 26200, Oklahoma City, OK 73125, and must be accompanied by a check or money order for the appropriate fee payable to the FAA; or

(2) In any other manner and form approved by the Administrator and must be accompanied by acceptable form of payment for the appropriate fee.

(d) A request for the replacement of a lost or destroyed knowledge test report must be made:

(1) By letter to the Department of Transportation, FAA, Airmen Certification Branch, P.O. Box 25082, Oklahoma City, OK 73125, and must be accompanied by a check or money order for the appropriate fee payable to the FAA; or

(2) In any other manner and form approved by the Administrator and must be accompanied by acceptable form of payment for the appropriate fee.

(e) The letter requesting replacement of a lost or destroyed airman certificate, medical certificate, or knowledge test report must state:

(1) The name of the person;

(2) The permanent mailing address (including ZIP code), or if the permanent mailing address includes a post office box number, then the person's current residential address;

(3) The certificate holder's date and place of birth; and

(4) Any information regarding the—

(i) Grade, number, and date of issuance of the airman certificate and ratings, if appropriate;

(ii) Class of medical certificate, the place and date of the medical exam, name of the Airman Medical Examiner (AME), and the circumstances concerning the loss of the original medical certificate, as appropriate; and

(iii) Date the knowledge test was taken, if appropriate.

(f) A person who has lost an airman certificate, medical certificate, or knowledge test report may obtain in a form or manner approved by the Administrator, a document conveying temporary authority to exercise certificate privileges from the FAA Aeromedical Certification Branch or the Airman Certification Branch, as appropriate, and the—

(1) Document may be carried as an airman certificate, medical certificate, or knowledge test report, as appropriate, for a period not to exceed 60 days pending the person's receiving a duplicate under paragraph (b), (c), or (d) of this section, unless the person has been notified that the certificate has been suspended or revoked.

(2) Request for such a document must include the date on which a duplicate certificate or knowledge test report was previously requested.

PART 65—CERTIFICATION: AIRMEN OTHER THAN FLIGHT CREWMEMBERS

■ 30. The authority citation for part 65 is revised to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701–44703, 44707, 44709–44711, 45102–45103, 45301–45302.

■ 31. Revise § 65.59 to read as follows:

§ 65.59 Skill requirements.

An applicant for an aircraft dispatcher certificate must pass a practical test given by the Administrator, with respect to any one type of large aircraft used in air carrier operations. To pass the practical test for an aircraft dispatcher certificate, the applicant must demonstrate skill in applying the areas of knowledge and topics specified in appendix A of this part to preflight and all phases of flight, including abnormal and emergency procedures.

■ 32. Revise the introductory text of appendix A to read as follows:

Appendix A to Part 65—Aircraft Dispatcher Courses

Overview

This appendix sets forth the areas of knowledge necessary to perform dispatcher functions. The items listed below indicate the minimum set of topics that must be covered in a training course for aircraft dispatcher certification. The order of coverage is at the discretion of the approved school.

* * * * *

PART 91—GENERAL OPERATING AND FLIGHT RULES

■ 33. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 1155, 40101, 40103, 40105, 40113, 40120, 44101, 44111, 44701, 44704, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506–46507, 47122, 47508, 47528–47531, 47534, Pub. L. 114–190, 130 Stat. 615 (49 U.S.C. 44703 note); articles 12 and 29 of the Convention on International Civil Aviation (61 Stat. 1180), (126 Stat. 11).

■ 34. Effective August 27, 2018, in § 91.109, revise paragraph (c)(1) to read as follows:

§ 91.109 Flight instruction; Simulated instrument flight and certain flight tests.

* * * * *

(c) * * *

(1) The other control seat is occupied by a safety pilot who possesses at least:

(i) A private pilot certificate with category and class ratings appropriate to the aircraft being flown; or

(ii) For purposes of providing training for a solo cross-country endorsement under § 61.93 of this chapter, a flight instructor certificate with an appropriate sport pilot rating and meets the requirements of § 61.412 of this chapter.

* * * * *

■ 35. Effective December 24, 2018, in § 91.313, revise paragraphs (b), (c), and (d)(3) and (4) and add paragraphs (d)(5) and (h) to read as follows:

§ 91.313 Restricted category civil aircraft: Operating limitations.

* * * * *

(b) For the purpose of paragraph (a) of this section, the following operations are considered necessary to accomplish the work activity directly associated with a special purpose operation:

(1) Flights conducted for flight crewmember training in a special purpose operation for which the aircraft is certificated.

(2) Flights conducted to satisfy proficiency check and recent flight experience requirements under part 61 of this chapter provided the flight crewmember holds the appropriate category, class, and type ratings and is employed by the operator to perform the appropriate special purpose operation.

(3) Flights conducted to relocate the aircraft for delivery, repositioning, or maintenance.

(c) No person may operate a restricted category civil aircraft carrying persons or property for compensation or hire. For the purposes of this paragraph (c), a special purpose operation involving the carriage of persons or material necessary to accomplish that operation, such as crop dusting, seeding, spraying, and banner towing (including the carrying of required persons or material to the location of that operation), an operation for the purpose of providing flight crewmember training in a special purpose operation, and an operation conducted under the authority provided in paragraph (h) of this section are not considered to be the carriage of persons or property for compensation or hire.

(d) * * *

(3) Performs an essential function in connection with a special purpose operation for which the aircraft is certificated;

(4) Is necessary to accomplish the work activity directly associated with that special purpose; or

(5) Is necessary to accomplish an operation under paragraph (h) of this section.

* * * * *

(h)(1) An operator may apply for deviation authority from the provisions of paragraph (a) of this section to conduct operations for the following purposes:

(i) Flight training and the practical test for issuance of a type rating provided—

(A) The pilot being trained and tested holds at least a commercial pilot certificate with the appropriate category and class ratings for the aircraft type;

(B) The pilot receiving flight training is employed by the operator to perform a special purpose operation; and

(C) The flight training is conducted by the operator who employs the pilot to perform a special purpose operation.

(ii) Flights to designate an examiner or qualify an FAA inspector in the aircraft type and flights necessary to provide continuing oversight and evaluation of an examiner.

(2) The FAA will issue this deviation authority as a letter of deviation authority.

(3) The FAA may cancel or amend a letter of deviation authority at any time.

(4) An applicant must submit a request for deviation authority in a form and manner acceptable to the Administrator at least 60 days before the date of intended operations. A request for deviation authority must contain a complete description of the proposed operation and justification that establishes a level of safety equivalent to that provided under the regulations for the deviation requested.

■ 36. Revise § 91.531 to read as follows:

§ 91.531 Second in command requirements.

(a) Except as provided in paragraph (b) of this section, no person may operate the following airplanes without a pilot designated as second in command:

(1) Any airplane that is type certificated for more than one required pilot.

(2) Any large airplane.

(3) Any commuter category airplane.

(b) A person may operate the following airplanes without a pilot designated as second in command:

(1) Any airplane certificated for operation with one pilot.

(2) A large airplane or turbojet-powered multiengine airplane that holds a special airworthiness certificate, if:

(i) The airplane was originally designed with only one pilot station; or

(ii) The airplane was originally designed with more than one pilot station, but single pilot operations were permitted by the airplane flight manual or were otherwise permitted by a branch of the United States Armed Forces or the armed forces of a foreign contracting State to the Convention on International Civil Aviation.

(c) No person may designate a pilot to serve as second in command, nor may any pilot serve as second in command, of an airplane required under this section to have two pilots unless that pilot meets the qualifications for second in command prescribed in § 61.55 of this chapter.

■ 37. Effective December 24, 2018, in § 91.1015, add paragraph (h) to read as follows:

§ 91.1015 Management specifications.

* * * * *

(h) A program manager may obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the program manager's management specifications. A document provided by the program manager may be carried as an airman certificate or medical certificate on flights within the United States for up to 72 hours.

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

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

Authority: 49 U.S.C. 106(f), 106(g), 40103, 40113, 40119, 41706, 42301 preceding note added by Pub. L. 112–95, sec. 412, 126 Stat. 89, 44101, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44729, 44732; 46105; Pub. L. 111–216, 124 Stat. 2348 (49 U.S.C. 44701 note); Pub. L. 112–95, 126 Stat. 62 (49 U.S.C. 44732 note).

■ 39. Effective December 24, 2018, in § 121.383, revise paragraphs (a)(2) and (b) and add paragraph (c) to read as follows:

§ 121.383 Airman: Limitations on use of services.

(a) * * *

(2) Has in his or her possession while engaged in operations under this part—

(i) Any required appropriate current airman and medical certificates; or

(ii) A temporary document issued in accordance with paragraph (c) of this section; and

* * * * *

(b) Each airman covered by paragraph (a)(2) of this section shall present his or her certificates or temporary document for inspection upon request of the Administrator.

(c) A certificate holder may obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications. A document provided by the certificate holder may be carried as an airman certificate or medical certificate on flights within the United States for up to 72 hours.

* * * * *

PART 135—OPERATING REQUIREMENTS: COMMUTER AND ON DEMAND OPERATIONS AND RULES GOVERNING PERSONS ON BOARD SUCH AIRCRAFT

■ 40. The authority citation for part 135 is revised to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 41706, 44701–44702, 44705, 44709, 44711–44713, 44715–44717, 44722, 44730, 45101–45105; Pub. L. 112–95, 126 Stat. 58 (49 U.S.C. 44730).

■ 41. Effective December 24, 2018, revise § 135.95 to read as follows:

§ 135.95 Airmen: Limitations on use of services.

(a) No certificate holder may use the services of any person as an airman unless the person performing those services—

(1) Holds an appropriate and current airman certificate; and

(2) Is qualified, under this chapter, for the operation for which the person is to be used.

(b) A certificate holder may obtain approval to provide a temporary document verifying a flightcrew member's airman certificate and medical certificate privileges under an approved certificate verification plan set forth in the certificate holder's operations specifications. A document provided by the certificate holder may be carried as an airman certificate or medical certificate on flights within the United States for up to 72 hours.

■ 42. Effective November 26, 2018, in § 135.99, add paragraphs (c) and (d) to read as follows:

§ 135.99 Composition of flight crew.

* * * * *

(c) Except as provided in paragraph (d) of this section, a certificate holder authorized to conduct operations under instrument flight rules may receive authorization from the Administrator through its operations specifications to establish a second-in-command professional development program. As part of that program, a pilot employed by the certificate holder may log time as

second in command in operations conducted under this part and part 91 of this chapter that do not require a second pilot by type certification of the aircraft or the regulation under which the flight is being conducted, provided the flight operation is conducted in accordance with the certificate holder's operations specifications for second-in-command professional development program; and—

(1) The certificate holder:

(i) Maintains records for each assigned second in command consistent with the requirements in § 135.63;

(ii) Provides a copy of the records required by § 135.63(a)(4)(vi) and (x) to the assigned second in command upon request and within a reasonable time; and

(iii) Establishes and maintains a data collection and analysis process that will enable the certificate holder and the FAA to determine whether the second-in-command professional development program is accomplishing its objectives.

(2) The aircraft is a multiengine airplane or a single-engine turbine-powered airplane. The aircraft must have an independent set of controls for a second pilot flightcrew member, which may not include a throwover control wheel. The aircraft must also have the following equipment and independent instrumentation for a second pilot:

(i) An airspeed indicator;

(ii) Sensitive altimeter adjustable for barometric pressure;

(iii) Gyroscopic bank and pitch indicator;

(iv) Gyroscopic rate-of-turn indicator combined with an integral slip-skid indicator;

(v) Gyroscopic direction indicator;

(vi) For IFR operations, a vertical speed indicator;

(vii) For IFR operations, course guidance for en route navigation and instrument approaches; and

(viii) A microphone, transmit switch, and headphone or speaker.

(3) The pilot assigned to serve as second in command satisfies the following requirements:

(i) The second in command qualifications in § 135.245;

(ii) The flight time and duty period limitations and rest requirements in subpart F of this part;

(iii) The crewmember testing requirements for second in command in subpart G of this part; and

(iv) The crewmember training requirements for second in command in subpart H of this part.

(4) The pilot assigned to serve as pilot in command satisfies the following requirements:

(i) Has been fully qualified to serve as a pilot in command for the certificate holder for at least the previous 6 calendar months; and

(ii) Has completed mentoring training, including techniques for reinforcing the highest standards of technical performance, airmanship and professionalism within the preceding 36 calendar months.

(d) The following certificate holders are not eligible to receive authorization for a second-in-command professional development program under paragraph (c) of this section:

(1) A certificate holder that uses only one pilot in its operations; and

(2) A certificate holder that has been approved to deviate from the requirements in § 135.21(a), § 135.341(a), or § 119.69(a) of this chapter.

■ 43. In § 135.245, revise paragraph (a) and add paragraphs (c) and (d) to read as follows.

§ 135.245 Second in command qualifications.

(a) Except as provided in paragraph (b) of this section, no certificate holder may use any person, nor may any person serve, as second in command of an aircraft unless that person holds at least a commercial pilot certificate with appropriate category and class ratings and an instrument rating.

* * * * *

(c) No certificate holder may use any person, nor may any person serve, as second in command under IFR unless that person meets the following instrument experience requirements:

(1) *Use of an airplane or helicopter for maintaining instrument experience.* Within the 6 calendar months preceding the month of the flight, that person performed and logged at least the following tasks and iterations in-flight in an airplane or helicopter, as appropriate, in actual weather conditions, or under simulated instrument conditions using a view-limiting device:

(i) Six instrument approaches;

(ii) Holding procedures and tasks; and

(iii) Intercepting and tracking courses through the use of navigational electronic systems.

(2) *Use of an FSTD for maintaining instrument experience.* A person may accomplish the requirements in paragraph (c)(1) of this section in an approved FSTD, or a combination of aircraft and FSTD, provided:

(i) The FSTD represents the category of aircraft for the instrument rating privileges to be maintained;

(ii) The person performs the tasks and iterations in simulated instrument conditions; and

(iii) A flight instructor qualified under § 135.338 or a check pilot qualified under § 135.337 observes the tasks and iterations and signs the person's logbook or training record to verify the time and content of the session.

(d) A second in command who has failed to meet the instrument experience requirements of paragraph (c) of this section for more than six calendar months must reestablish instrument recency under the supervision of a flight instructor qualified under § 135.338 or a check pilot qualified under § 135.337. To reestablish instrument recency, a second in command must complete at least the following areas of operation required for the instrument rating practical test in an aircraft or FSTD that represents the category of aircraft for the instrument experience requirements to be reestablished:

(1) Air traffic control clearances and procedures;

(2) Flight by reference to instruments;

(3) Navigation systems;

(4) Instrument approach procedures;

(5) Emergency operations; and

(6) Postflight procedures.

PART 141—PILOT SCHOOLS

■ 44. The authority citation for part 141 continues to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701–44703, 44707, 44709, 44711, 45102–45103, 45301–45302.

■ 45. Effective November 26, 2018, in § 141.5, revise paragraph (d) to read as follows:

§ 141.5 Requirements for a pilot school certificate.

* * * * *

(d) Has established a pass rate of 80 percent or higher on the first attempt for all:

(1) Knowledge tests leading to a certificate or rating;

(2) Practical tests leading to a certificate or rating;

(3) End-of-course tests for an approved training course specified in appendix K of this part; and

(4) End-of-course tests for special curricula courses approved under § 141.57.

* * * * *

■ 46. Effective August 27, 2018, in appendix D to part 141, section 4:

■ a. Revise paragraphs (b)(1)(ii) and (b)(2)(ii); and

■ b. Amend paragraphs (b)(3)(i) and (b)(4)(i) by removing the words ''flight simulator'' and adding in their place the words ''full flight simulator''.

The revisions read as follows:

Appendix D to Part 141—Commercial Pilot Certification Course

* * * * *

4. * * *

(b) * * *

(1) * * *

(ii) Ten hours of training in a complex airplane, a turbine-powered airplane, or a technically advanced airplane that meets the requirements of § 61.129(j) of this chapter, or any combination thereof. The airplane must be appropriate to land or sea for the rating sought;

* * * * *

(2) * * *

(ii) 10 hours of training in a multiengine complex or turbine-powered airplane, or any combination thereof;

* * * * *

Appendix I to Part 141—[Amended]

■ 47. In appendix I to part 141, section 4, redesignate the second paragraph (k)(2)(iv) as paragraph (k)(2)(v).

Issued in Washington, DC, under the authority of 49 U.S.C. 106(f), 44701(a)(5), and 44703(a), on June 6, 2018.

Daniel K. Elwell,

Acting Administrator.

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